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Vol. 1, No. 4 MARCH, 1926

The Journal of

The American Dietetic Association

THE PLACE OF THE DIETETIC DEPARTMENT IN THE HOSPITAL, FROM THE ADMINISTRATOR'S VIEWPOINT[1]

E. S. GILMORE

President of the American Hospital Association

In considering the place the Dietetic Department of a hospital should occupy, one naturally thinks first of the value placed upon such a department by the hospital executive. From my own experience I have no hesitancy in putting dietetics side by side with the other laboratories including not alone the pathological but the physiological, chemical, physiotherapeutic, and x-ray laboratories as well. Much more than dietetics only must be considered, for this special field has also some of the elements of the pharmacy since the doctor prescribes a diet and the dietitian fills the prescription. There is little human value in a correct diagnosis of disease if there are no means of cure. The doctor may determine that the patient has diabetes and order drugs to assist in its cure, but if the food taken in by the patient offsets the action of the drug, all progress is neutralized. In many ailments improper feeding is detrimental to correct medication. However, you know all this better than I do and it is not necessary for me to develop the subject.

A most important point in connection with the diet kitchen is its location. Naturally, one would say it should be in the center of the building; but that is true of every other department of the hospital. Advocacy of such doctrine puts one in the position of the contractor who was instructed when building a stadium to place all the seats in the eighth row opposite the 50-yard line. It is desirable to get all the de-

[1]Read at the annual meeting of the American Dietetic Association, held at Chicago in October, 1925.

partments in a hospital as centrally located as possible and this has brought about the construction of the skyscraper type hospitals.

The central diet kitchen is the nucleus of the plan known as the Bacon plan, proposed by Mr. Asa Bacon, Superintendent of the Presbyterian Hospital, Chicago. I am heartily in accord with this plan for a small hospital, but I do not believe it will work effectively in a large hospital since it does away with diet kitchens on the individual floors of the building. These kitchens in my judgment are necessary for the proper serving of food to the patients. I believe that a diet kitchen should be as centrally located as possible but in any event quite near the main kitchen and storeroom. In this way much of the rough work, such as preparing vegetables, can be done in the large kitchen and the small diet kitchen be relieved of the burden. As far as possible all foods should be cooked in the main kitchen and taken to the diet kitchen for distribution. This food can then be sent to the individual floors, supplemented by such special diets as may be ordered by the physicians. To facilitate the transportation of food from the main diet kitchen to the floor kitchens, dumb waiters are very convenient. In each floor kitchen the trays should be set up and carried individually and immediately to the patient by the tray-maids. This would insure the patient's receiving his food with as little delay as possible and at the temperature desired.

The size of the diet kitchen is a most important factor. I know one hospital twenty-five years old in which the architect demonstrated his high progressiveness. By his plans the diet quarters grew to 12 by 14 feet, although at that time generally they were about 4 by 8 feet in dimension. In general even today they are far too small. The diet kitchens of the last generation contained only a gas plate and their principal use was to warm over soup. Between meals the nurses used them for the making of poultices.

A good rule by which the size of a diet kitchen may be determined is to calculate the necessary space for all the things you wish to do therein and then double the space. If you should happen to build more largely than you need at that time, you will soon grow to it.

Graduate nurses also should have a place set aside in each floor kitchen and they should have their own equipment. In this room they should be expected to prepare all the ordinary trays for their patients. It not infrequently happens that a patient does not care for a full tray of food, but does want a salad or some expecially appealing dish. In such a case the graduate nurse can please her patient and save expense to the hospital.

Many of you, doubtless, have heard it said that the appetite should be the patient's guide and that nature can be depended upon to select the proper diet. This, of course, is foolish. How foolish, is well illustrated by the fact that the diabetic patient in eating candy and the fat lady of the circus in eating bread, butter, pork, and fat meats are both following the dictates of their appetites with no interference by nature except the resulting punishment. Nature looks out for people in the gross, but has no interest in the individual. She permits a woman to suffer the agonies of confinement and die as a result. She feels that she can populate the earth even though some perish. Nature permits poison to kill and accidents to cause death. Were she as interested in the individual as she is in the mass she would generate an antitoxin to offset a poison immediately upon its entrance to the body and she would grow new legs and arms after amputation as she now attempts to remedy and restore bobbed hair and trimmed finger nails.

Occasionally, too, you meet doctors, and not always the older doctors, who have a very limited knowledge of dietetics. They know there are such things as carbohydrates and proteins and that in some way they are connected with food. They also remember studying in school something about calories but their memory is uncertain whether a calory is a germ or a germicide. They are in much the same attitude of mind as that of the old lady who said it was either eating tomatoes or the not eating, she could not remember which, that either caused cancer or cured it, she had forgotten which. As to vitamins, some of these good men know nothing. I fear there is an appreciable proportion of our doctors who cannot give a correct, scientific definition of "vitamin"; I can not, and I rather surmise some of you can not.

It has never seemed altogether wise to put the dietitian in the place of the steward, principally because it is a waste of good material. The dietitian needs to know many things which the steward would have no use for; while the steward must have experience in purchasing and in the management of help, neither of which is necessary to the dietitian. The field is large enough for both. I would not make the dietitian subordinate to the steward, nor the steward subordinate to the dietitian, but both should take direction from the superintendent. I consider the work of the dietitian professional work which requires a higher degree of technical knowledge than that required by the steward.

If you will permit me, I should like to make some suggestions to you as professional dietitians:

First, get results. Your value to the patient, to the physician, and

the institution depends upon your professional ability. We hospital superintendents are sometimes considered mercenary and desirous of avoiding unnecessary expense to a reprehensible degree. If, however, the results you get commend themselves to your superintendent or become sufficiently important to the doctors to warrant their endorsement, the superintendent will hesitate a long time before dispensing with your services.

Second, I would stay in a hospital a sufficient time to become identified with the best interests of the institution. Were I to criticize, and I do not wish to do so, I would say that there is a tendency on the part of dietitians to change positions so frequently that neither the hospitals nor themselves are greatly benefited.

You have been told repeatedly by speakers and urged undoubtedly by your employers to practice economy. This, of course, is an essential consideration, but the time to practice economy is before the food reaches the patient. Once food has been placed before the patient and not eaten, it must go to the garbage can. I knew a superintendent, now dead (I state this that you may know it was not I), who thought that food not eaten when served a patient could be utilized later. Everything went satisfactorily until one day a chicken pot-pie was served on the table of his executives. When the pie was open the birds did not begin to sing, but a strong odor of iodiform pervaded the atmosphere. The people left the table, quietly but quickly, seeking solace and solitude.

Vary your meals. The lists of foods prescribed in the different diets are sufficiently large to permit of a patient's receiving a pleasing variety at succeeding meals rather than the same thing day after day. This gratifies the patient and aids enormously his recovery.

I have been asked to say something about dietary budgets. I am not so enthusiastic an advocate of the budget system as some are. The budget idea as originally proposed and more or less universally adopted does not appeal to me. I worked under the system once and know its disadvantages. When an executive allocates certain sums to his department heads with instructions that they must conduct their departments within the specified amounts, he is not doing what is best for his institution. If the head of the department in the normal execution of his work uses up the amount set aside for him and no more, the budget is of no particular value. If he requires more than the designated amount, either he must run over his budget, in which event it is of no value, or he must restrict expenditures to the detriment of his depart-

ment. In that case the budget works injury. In a hospital this is a serious matter because a hospital is dealing with life and death and each department must function at its best. If the head of the department does not use up all of his allotment, he fears to turn back any of it in the belief that if he does it will be cut next year, so he spends needlessly the amount he otherwise would save. In one instance the head of a department who had exhausted his budget asked the head of another department who had a surplus to buy things for him with the promise that he would return the favor when his allowance was made.

It is a difficult thing to compel people either to be honest or economical if they do not want to be. It would seem to be easier to dispense with the people not so inclined and to secure others with these desirable qualifications. In order that I may know which of my subordinates are not economical, I have my accountant keep track of all expenditures and income, where there is income, and on the tenth of each month he places on my desk a statement showing an itemized list of expenses and income in each department of the Hospital for the preceding month. I have followed this custom for many years, so I can at any time compare the expenses for a month or year of any department with the expenses for the preceding month or year over a considerable period of time. When the expenses exceed the amount formerly spent, the head of the department is given an opportunity to explain why. Usually it is found that he has taken advantage of an exceptionally low offer on some commodity and has laid in a large supply. The knowledge that his expenses are watched is sufficient check upon him; however, this does not prevent his doing that which in his judgment is best for his department and it gives him a satisfaction with his position and a contentment in his work which make for betterment of service in the hospital.

I do not care how much a department head spends if in so doing he will bring in income either directly or indirectly to an amount in excess of the expenditure. The man who will spend a dollar and get back a dollar and ten cents is the man I want in my employ. I do not believe true economy consists in the head of an institution being tied to his desk to scrutinize bills and make life a burden for his subordinates. A certain amount of this has to be done, but when it is carried to such a point that the executive does not have time fairly to inspect his plant, meet his subordinates and aid them in keeping their dispositions and their tempers sweet and to think up methods for bettering his institution and increasing its revenue, he is practicing false economy. As a hospital

executive I would say that the superintendent who devotes a large share of his time to seeing that his doctors, his patients, and their friends are satisfied is laying the foundation for an income that will amply provide for any expenditures his subordinates are likely to make. The hospital superintendent who spends all his time at his desk may save two, five, or ten thousand dollars a year in keeping down expenses and at the same time may lose four, ten, or twenty thousand dollars income that he could have secured had he been about the hospital looking after its proper functioning.

What is true of the hospital as a whole is true of its departments, so the dietitian in charge of a department, while practicing sensible economy, should not carry it to the point where she has no time to see that the patients are pleased with the food they receive and that the doctors approve the diet she provides; nor should her desire for economy prevent her doing research work that will make for the advancement of her profession.

You who are present today are building the foundations for the future of dietetics. May you work wisely, ever bearing in mind the superstructure to be erected by your successors.

MEDICAL TREATMENT OF ULCER OF THE STOMACH AND DUODENUM[1]

DR. MILTON M. PORTIS
Chicago, Illinois

Unfortunately, the exact etiology of ulcer is still unknown. A great many ulcers have been produced experimentally, but, as yet, in none of these is there conclusive evidence to explain the origin of the ulcers we see. Rosenow has demonstrated that the streptococcus can produce ulcers in animals, and he emphasizes the view that these streptococci may take origin in focal infections, have a specific, selective action on the stomach and duodenum, and produce ulcers which simulate very closely those seen in our patients. It is also probable that the tonus, motility and emptying time of the stomach are factors in ulcer formation. The prominent, outstanding, clinical facts are that in most of the cases of ulcer, the stomach contents contain an increased amount of acid, and that neutralization of this increased acid gives the patient relief from his symptoms, and aids in the cure of the ulcer.

As the exact cause and the pathogenesis of ulcer are unknown, the treatment must necessarily be directed chiefly toward the predisposing factors, always keeping the living pathology and potentialities of ulcer foremost in our minds. In the prophylactic treatment, one must recognize that the probable etiological factors, both direct and indirect, should be corrected, so as to prevent ulcer development. All focal infections should be removed, especially infected tonsils, teeth and sinuses, also the appendix, gall bladder, and the pelvic organs should be properly corrected, if they show any signs of disease. Any underlying condition of which hyperchlorhydria is but a symptom, should be properly treated. This includes neurasthenia, constipation, arterio-sclerosis and anemia. When all of the sources of focal infection have been examined and removed, then, and then only, with positive clinical, laboratory and x-ray evidence for ulcer, is one justified in prescribing for the patient a thorough hospital medical course of treatment, which must be followed by a sufficiently prolonged ambulatory management.

[1]Read before the American Dietetic Association, Chicago, Illinois, October 12 to 16, 1925.

Before putting the patient to the expense of hospital management and after care, it is necessary to consider his social and financial status. For those who cannot afford the expense incurred, it may be wise to advise surgical measures to shorten the time of the treatment, even though medical treatment could bring about a healing of the ulcer. Further, careful consideration must be given the question of whether the ulcer is simple or complicated, and whether or not it had best be treated by operation. This phase will be considered later. The simple, uncomplicated ulcer of the stomach and duodenum reacts best to medical treatment. In complicated ulcers, the question of judgment as to the course of procedure demands wide experience. It must not be forgotten that multiple ulcers occur in the stomach and duodenum, and frequently in both stomach and duodenum. This may modify the decision concerning the advisability of medical treatment.

It is wise, in all cases, to determine the blood grouping of the ulcer patients, and have donors in readiness in the event of a threatening hemorrhage. The blood chemistry should be carefully studied at the outset, and during the course of treatment, to decide the amount of alkali which can be safely given to avoid alkalosis and detect changes in renal function.

We have been following the method originally described by Leube in the first part of the treatment. This consists in putting the patient to bed and nothing by mouth for a few days, but giving water per rectum. This preliminary starvation period produces a physiologic rest which is of great importance. If the patient is poorly nourished or has any evidence of nephritis, the starvation period should be omitted. The urine is examined daily during the first few days, and then at regular intervals during the remainder of the treatment. Renal changes may arise at any time during the course of the treatment, which may be due to the constant use of alkalies. Shattuck has shown that ulcer-bearing patients with damaged kidneys should be given alkalies with considerable caution.

In patients who have had no recent hemorrhage, a duodenal tube is passed into the jejunum and kept there for seven to ten days. Feedings which are given through this tube consist of peptonized milk and eggs. Orange juice and any other kind of medication desired can be administered through this tube. The feedings should enter the jejunum at body temperature by using an inverted thermos bottle. They also should enter very slowly, simulating the normal manner in which food passes into the jejunum. The flow is easily regulated by a petcock.

The liquid should be strained through several layers of gauze to free it from all particles which may plug the metal tip.

At the outset duodenal feedings consist of 6 ounces of peptonized milk, diluted with 10 ounces of water, and are given at two-hour intervals, from 8 a.m. to 8 p.m. The amount of milk is gradually increased until each feeding consists of 10 ounces of peptonized milk, with enough water to make it flow easily. On the third day, one egg is added to the total amount of milk, and the entire mixture is peptonized. Another egg is added on the following day and a third the next day. Feedings are continued at two-hour intervals. Between the feedings, 2 or more ounces of orange juice are given several times a day through the tube. The tube is usually withdrawn on the tenth day. In cases associated with hemorrhage, the jejunal feedings by means of the tube are omitted, and the customary treatment for hemorrhage given. This consists of complete rest in bed, enough opiates to keep the patient quiet, and an ice coil used continuously on the abdomen. Tap water is given per rectum, or hypodermoclysis. Bismuth subcarbonate, combined with calcium carbonate, may be given with a small amount of ice water, at frequent intervals, to neutralize the acid and help to control bleeding.

If the bleeding continues, as recognized by a persistent positive test for blood in the stools, signs of secondary anemia, such as restlessness, pallor, rapid pulse and decreasing hemolgobin and red cell count, then one must use other measures to stop the hemorrhage. Transfusion, preferably by the direct method, should be resorted to, and may be repeated.

Most of the bleeding ulcers will react to the medical plan outlined, and the use of blood transfusions. However, when the hemorrhage resists all of these measures, then surgical intervention is necessary. The main object is to control the hemorrhage, which may be accomplished by cauterization or suture of the base of the ulcer, or gastric resection. Some surgeons recommend gastroenterostomy without any further measures.

When the stool examination shows a cessation of the bleeding, feedings of frozen milk and cream are started, similar to the ones used after the duodenal feedings of ulcer cases without bleeding. Equal parts of frozen milk and cream are given by mouth, according to the method of Lenhartz, at two-hour intervals. This is increased the next day to two ounces and on the third day to four ounces.

A powder consisting of twenty grains calcium carbonate and ten grains magnesium carbonate are given with two ounces of ice water,

twenty minutes after meals. The amount of water is increased each day to eight ounces, and the dose of the powder is regulated to control acidity and the laxative needs of the patient. During the night, the powder alone may be given every two hours, if necessary, to control pain, but if the pain persists, the stomach is carefully emptied. The patient should not be wakened during the night for food or medication. Priesnitz compresses are kept constantly on the abdomen except in bleeding cases. On the fourth day, six ounces of ice cold milk and cream are substituted for the frozen mixture. This is increased on the following day to eight ounces. The dose of the powder is again regulated according to the conditions, and this is determined by frequent stomach aspirations and observations of the blood chemistry, to detect the beginning of alkalosis. This latter condition should be recognized at once, for the patient may become rapidly very ill and present the clinical picture of toxemia and depression, frequently associated with nausea and vomiting and often with tetany. A study of the blood chemistry shows a decrease of chlorides and an increase of the carbon dioxide combining power, along with a marked increase of blood urea, and will at once indicate the presence and the severity of the alkalosis. Alkalies should be stopped immediately, and if any are necessary later on, Shattuck has advised the use of triple phosphates of calcium and magnesium in 10 to 20 grain doses, as these do not induce alkalosis.

At the end of the first week of milk feedings, orange juice and cream soups are added. Then pureed vegetables; baked, stewed and cooked fruit, except berries; cooked cereals; soft boiled or poached eggs; and toast with unsalted butter, are gradually given. The feedings are kept up every two hours, followed by the alkalinizing powder described. At the end of three or four weeks, the patient is allowed to be out of bed for increasing periods, and finally permitted to take on more activity, leaving the hospital at the end of five or six weeks. After the patient is up and about, the problem which now presents itself is no longer one of binding and neutralizing the excess of the acid, but a reduction of the amount of secretion called forth.

In experiments on dogs with Pawlow pouches, the writer, some fifteen years ago, demonstrated that foods ingested in finely divided particles left the stomach in one-half the time required by coarser foods. It was found that salt, seasoning of all kinds, and meat extracts stimulate gastric secretion. Meat called forth the greatest secretion and remained in the stomach the longest time. Finely chopped meat left the stomach in less than half the time required by larger pieces. Coffee, tea, and

alcohol also increased the gastric secretion. The class of food that caused least secretion was the vegetables. They excited a smaller amount of secretion per hour, and the total time of secretion was less than one-half that induced by meat. Hence, the diet for the ulcer patients must take cognizance of these fundamental experimental facts. Inasmuch as the same food in a finely divided form reduces the secretory time more than one-half, all food should, therefore, be crushed or finely ground, or put through a collender. The vegetable puree is an ideal article of diet. Vegetable soups should be made with water or milk, but not with meat, for meat extracts are powerful excitants to the gastric juice. In addition to vegetables, milk, cream, eggs, and toast, with unsalted butter freely, may be used early, and later stewed fruits except berries, because of the seeds, cooked cereals, fresh water fish, boiled or broiled, simple desserts and jellies. The total amount of food at a meal should not exceed fifteen ounces in bulk.

Alkalies are useful in neutralizing the excess of acid secreted, but they also check secretion if given one-half hour before meals, as used by Rosenblatt and demonstrated by the results of my experimental animals. He has shown that the alkalies act indirectly, exerting their influence by reflex action in the bowel. They should be used in amounts large enough to pass as alkalies into the duodenum. Because some increase of acid still persists, it is wise to give a neutralizing power a half hour after meals for the first few weeks of the ambulatory treatment, and after that give it only whenever there is any distress.

Three meals a day are selected from any of the foods used while at the hospital, but the amounts are increased so that at breakfast the patient has orange juice or baked or stewed fruit, a cereal, an egg, milk or cocoa, and toast with unsalted butter. The noon meal consists of a cream soup, one or two vegetables, including mashed potato, one egg in any form except fried, stewed or baked fruit, milk and toast, with unsalted butter freely. The evening meal is similar to the noon meal, but fish may be substituted in place of an egg. The fish should be fresh boiled or broiled, but using no seasoning in its preparation. Between meals and at bedtime a glass of rich milk is given. Neutralon, which is an aluminum oxide, is given in twenty to sixty grain doses, a half hour before meals. It not only neutralizes the free hydrochloric acid, but the aluminum chloride which is formed has a further astringent action. Besides, it is not laxative like the magnesium salts, and it does not liberate carbon dioxide as the carbonates do. If laxatives are necessary, desiccated sodium sulphate and sodium phosphate are added

in suitable dose. If the acid secretion is not properly controlled by these measures, then belladonna and strontium bromide may be added, and all given in one dose, a half hour before meals. The calcium carbonate and magnesium carbonate are given a half hour after meals, just as in the early part of treatment.

After three or four weeks of this plan, the supplementary milk feedings are omitted. The patient takes the three main meals described, with a powder a half hour before meals. The after meal powder is only given if the patient has distress. No meat is given in any form for three or four months.

After the diagnosis of ulcer has been made, it is important to decide whether or not medical or surgical measures should be carried out. There has been much discussion in recent years concerning the indications for medical and surgical treatment of peptic ulcer. Medical management such as I have outlined is usually successful, but there are still many conditions which require surgery. The recommendations in a given case depend upon the size, type, location and stage of the ulcer. All surgeons agree that acute, uncomplicated ulcers are best treated medically, except in acute perforations. The long-standing, chronic ulcers, which resist medical treatment, and especially in those with complications, frequently demand surgical intervention.

Most medical men agree that surgery should be resorted to in all ulcers that have failed to heal upon a thoroughly applied course of medical treatment, given for a sufficiently long period. Likewise, the exploration is demanded in all cases in which there is a suspicion of malignancy. Operations should also be advised in all cases of repeated, menancing hemorrhages, which have recurred in spite of careful medical management and transfusions. High-grade pyloric obstruction, hourglass contractions of the stomach, and disabling perigastric adhesions, which interfere with proper drainage of the stomach, should all be treated surgically. Cases with co-existing lesions in the gall bladder, appendix, pancreas, or pelvic organs, are best taken care of by the surgeon.

When surgery is resorted to, our best results have been in cases in which a resection of the ulcer was carried out. Pylorectomy as done by Polya and pyloroplasty, based on a Finney and Horsley type of operation, also the radical gastric resections, seem to produce more lasting cure and relief, although many surgeons follow the English school and do only a gastroenterostomy. To prevent a recurrence or the formation of a new ulcer, for several months after an operation a sys-

tematic course of diet should be followed, similar to that outlined after the medical hospital management.

In cases of long-standing gastric ulcer, which, fortunately, in our experience is much less common than the duodenal ulcer, we are less inclined to carry out prolonged medical treatment, because of its tendency to undergo a malignant change. Even though a number of observers have demonstrated with the x-ray that large craters of such ulcers can be healed by medical treatment, still we feel that it is impossible to differentiate by the x-ray alone whether we have to deal with a benign or malignant ulcer. Hence, it is better to give the patient the benefit of the doubt, and resort to surgery at once. In cases of severe hemorrhage, medical measures offer the best result, and it is only when repeated, menancing hemorrhages occur, that surgery is indicated.

Sir Moynihan in the Lancet of last year, said: "I think it a reproach to medicine that the surgeon should be compelled to operate so frequently for gastric and duodenal ulcer when such an ulcer should be cured far more often than it is by medical treatment. Physicians who acquaint themselves with the living pathology of gastric and duodenal ulcers realize how protracted and scrupulous the medical treatment of so complicated a lesion must necessarily be."

This, it seems to me, is a fair statement of the case. We must learn to diagnose our ulcers at an early stage, and institute thorough and persistent medical measures at once, and thus prevent the later complications. Until we can do so, the medical men must admit their failure in a certain per cent of ulcer cases. Unfortunately, the majority of patients with ulcers are not given a rigid and systematic course of treatment such as we have indicated, so that the original ulcer has never healed. But with the more intensive and thorough medical management, the medical cures should increase, and the surgical indications limited to the complicated, resistant lesions.

A COMPARATIVE STUDY OF ITALIAN, POLISH AND NEGRO DIETARIES[1]

GERTRUDE GATES MUDGE

Chairman, Social Service Section, American Dietetic Association

INTRODUCTION

Three years ago the Social Service Section of the American Dietetic Association initiated a series of studies of the dietary habits of different nationalities in certain large cities of the United states. The purpose of the survey was to secure a better understanding of foreign dietaries and to interpret the data thus secured for the use of nutrition and social workers.

The first study was made in Italian homes and was reported in The Journal of Home Economics, April, 1923. The next study was of Polish dietary habits and was published in The Bulletin of the American Dietetic Association, April, 1924. The final study was devoted to the Negro dietary, the data being incorporated in this paper.

In all 107 families were studied, of whom 38 were Italians, 36 were Polish and 44 were Negroes, the average number per family being the highest for the Polish and the lowest for the Negro families.

The weekly records for these studies were only secured through the active coöperation and untiring efforts of the investigators and their associates. The Italian surveys were made in New York City, Boston, Mass., Detroit, Mich., and Memphis, Tenn.; the Polish records were made in Pittsburg, Pa., Chicago, Ill., Cleveland, Ohio, and New Bedford, Mass.; and the Negro studies were made in New York City, Detroit and Battle Creek, Mich., and in Huntington, W. Va. The chairman cannot adequately express her appreciation of the hours of labor invested by the workers in the different cities. The Social Service Section is especially indebted to the A. I. C. P. of New York and the Visiting Housekeeper Association of Detroit for having undertaken both the Italian and Negro studies.

[1] Presented at the seventh annual meeting of the American Dietetic Association, Swampscott, Mass., October, 1924.

CHOICE OF FAMILIES

In the selection of the families it was stiputated that, in so far as possible, twelve records of each nationality should be secured in each city, all three economic levels to be represented. The arbitrary groupings in terms of yearly incomes were as follows: Group 1, below minimum for maintenance (less than $1000); Group 2, fairly adequate ($1000 to $1500); group 3, adequate for comfort (more than $1500). In the Italian homes where the average total income for all groups was lowest, the families were evenly divided among the three income groups. However, in New York 6 records were secured from group 1, and only 1 from group 3, while in Detroit, only 1 family was secured from group 1 and 7 from group 3.

In the Polish and Negro families, a larger number were found to be in the higher income groups, there being only 5 in group 1 of the Polish

TABLE 1

Weekly incomes

NATIONALITY	NUMBER OF FAMILIES	GROUP 1 (BELOW $1000)	GROUP 2 ($1000 TO $1500)	GROUP 3 (OVER $1500)	AVERAGE
Italians	36*	$16.00 (12)†	$22.00 (12)	$36.45 (12)	$24.81
Polish	36	13.71 (5)‡	23.91 (15)	47.77 (16)	32.80
Negro	33	14.49 (4)	22.61 (9)	39.79 (20)	32.03

* All income and food cost figures are omitted for the two Memphis dietaries.

† In all the tables the figures in parentheses may be interpreted as indicating the number of families included in the group.

‡ This average is not representative as some of the Chicago families were not wholly self-supporting.

and 4 in group 1 of the Negro families. There were 16 Polish families and 20 Negro families whose incomes totaled more than $1500, many of them being $2000 and over. It is interesting to note that in the Italian, as in the Negro study, the average incomes in New York City were less than those of the other cities studied.

METHODS OF PROCEDURE

An accurate record of the food consumed by each family for the period of one week (21 meals) was kept by each investigator. An inventory of the food on hand at the beginning and end of the experimental period was made, and all food expenditures recorded. In all the studies it was found that the problem of waste food was practically negligible.

Daily menus and characteristic recipes were recorded and are on file

for the use of those interested in nutrition problems, many having already been called for by different institutions and individuals.

LIVING CONDITIONS

Mother countries. Most of the Italian families came from Central and Southern Italy and had been in this country from eight to twenty-five years. The Polish families were evenly divided, having come originally from both Russian and Austrian Poland, and having lived in the United States for an average period of about twenty years. The Negro families in New York, Battle Creek and Huntington, West Virginia, were fairly old settlers and well acclimated to the food habits of the northern states; only in Detroit were found those who had come from the "Old South" as a result of labor migrations.

Children in families. On the whole the studies revealed a higher average number of children per family in the Polish homes, the Italian and Negro families ranking second and third, respectively. These figures become doubly significant in view of the fact that the Polish with the largest incomes (probably largest number of wage earners in the families) had the least efficient dietary records. The studies consistently demonstrated the difficulties encountered in securing sufficient energy as well as the other food values when the families were too large for adequate support.

Occupations. Each nationality seemed to have its own characteristic occupations. The majority of the Italians were engaged in a diversity of unskilled labor, especially in New York as compared with the well paid factory workers of Detroit. The Polish in Chicago were employed in unskilled occupations. In Cleveland and in Pittsburg they were engaged in steel mines and foundries, in which occupations they are uniformly successful and fairly well paid. The Negroes, irrespective of locality, were engaged in a variety of activities, from chauffeur or janitor to minister and real estate dealer. The Polish and Negro bread winners were frequently ably assisted in the supplementing of the family incomes by their industrious wives.

Weekly incomes. The weekly incomes of all the families showed an extremely wide range, the averages for the three different nationalities being as follows: Italian, $24.81, Polish, $32.80 and Negro, $32.03.

FOOD EXPENDITURES

Proportion of income spent for food. The average expenditure for food in the different national groups consistently decreased with the increase of

incomes; ranging from 79 per cent to 48.6 per cent for the Italians, from 84 per cent to 44 per cent in the Polish studies, and from 79.4 per cent to 40.2 per cent in the Negro dietaries. The Italian families spent the largest average proportion of their incomes for food, 63 per cent. The Polish spent 56 per cent and the Negro 49.7 per cent. As was suggested by Phillips and Howell in a study of "Differences in Dietary Customs" reported in the Journal of Home Economics in 1920, it is probable that the lower food expenditure among the Negroes may be accounted for by "the smaller families and the larger incomes" so frequently recorded in that group.

Cost per man per day. The average cost per man per day was strikingly uniform for the three national groups being, 47.3 cents for the Italian, 47.6 cents for the Polish and 48.4 cents for the Negro families.

TABLE 2

Distribution of families when arranged according to cost of food per man per day

COST PER MAN PER DAY	NUMBER OF FAMILIES WITH SPECIFIED COST PER DAY			
	Italian	Polish	Negro	Totals
From 20 to 25 cents	3	3		6
From 25 to 30 cents	1	1	1	3
From 30 to 35 cents	3	2	3	8
From 35 to 40 cents	6	5	5	16
From 40 to 45 cents	5	6	8	19
From 45 to 50 cents	5	5	3	13
From 50 to 55 cents	5	3	4	12
55 cents and over	8	11	9	28
Totals	36	36	33	105

Cost per 3000 calories. In the case of the Polish families, whose dietaries were so largely deficient in energy giving foods, there was a great difference between the cost per man per day and the cost per 3000 calories. These families averaged a cost of 58.2 cents per 300 calories as contrasted with 47.6 cents per man per day. In the Italian families the cost per 3000 calories only slightly exceeded the cost per man per day, while in the Negro dietaries the former figure was only 44 cents as compared with 48.4 cents per man per day. The latter figure indicates the average energy adequacy of the Negro dietaries studied.

In making a comparative table of expenditures for the different foods very interesting results were obtained.

Grain products. It was found that all three national groups spent less than the prescribed amount of 25 per cent for grain products and therefore suffered a corresponding energy deficiency in their diets. The

Italians averaged 19 per cent, the Polish, 20 per cent, and the Negroes, 19 per cent.

Milk and cheese. Again in the purchase of milk and cheese, primarily milk of course, the dietaries were pitifully deficient, the Italians spending 15 per cent for milk, the Polish, 13 per cent and the Negro, 14 per cent, as compared with a standard of 20 per cent. This inadequacy resulted in an inevitable calcium deficiency. The lack of milk was especially noticeable in the Huntington, West Virginia, Negro dietaries, where a purchase of seven pints of milk a week, irrespective of the number in family, is a common practice. Ignorance of nutrition information is most prevalent in cities remote from the centers of such activities.

TABLE 3

Cost per 3000 calories

COST PER 3000 CALORIES	NUMBER OF FAMILIES PAYING SPECIFIED AMOUNT PER 3000 CALORIES			
	Italians	Polish	Negro	Totals
From 20 to 25 cents	1		1	2
From 25 to 30 cents	2		1	3
From 30 to 35 cents	2	2	6	10
From 35 to 40 cents	3	3	6	12
From 40 to 45 cents	6	2	3	11
From 45 to 50 cents	8	4	4	16
From 50 to 55 cents	6	3	5	14
From 55 to 60 cents	2	7	5	14
From 60 to 65 cents	3	7	2	12
From 65 to 70 cents	2	1		3
70 cents and over	1	7		8
Totals	36	36	33	105

Meat and eggs. In all the groups too large a proportion of the food expenditures was invested in meat and eggs, the averages being 29 per cent, 34 per cent, and 27 per cent for the Italian, Polish and Negro dietaries, as compared with a standard of no more that 20 per cent. In all groups more money should have been invested in milk and vegetables and less in meat, which brings a less valuable return on the money invested.

Vegetables and fruits. In the Italian and Negro dietaries the average proportions spent for vegetables and fruits more nearly approximated the recommended minimum of 20 per cent, the average being 23 per cent for the Italian and 19 per cent for the Negro dietaries. The Polish dietaries were conspicuously deficient, averaging only 16 per cent for all groups. This resulted in a large average iron deficiency of 44 per cent, to say nothing of the deficiency in bulk and vitamines. Practically all of the dietaries were studied during the summer months, the vegetable

TABLE 4

Food costs of Italian, Polish and Negro dietaries

	ITALIAN				POLISH				NEGRO			
	Group 1 (12)	Group 2 (12)	Group 3 (12)	Average	Group 1 (5)	Group 2 (15)	Group 3 (16)	Average	Group 1 (4)	Group 2 (9)	Group 3 (20)	Average
Percentage of income spent for food	79.0	62.7	48.6	63.0	84.0	59.0	44.0	56.0	79.4	57.8	40.2	49.7
Cost per man per day	$0.429	$0.432	$0.560	$0.473	$0.420	$0.480	$0.490	$0.476	$0.424	$0.432	$0.520	$0.484
Cost per 3000 calories	.445	.500	.491	.480	.440	.600	.610	.582	.419	.421	.454	.440

TABLE 5

Proportions spent for different foods compared with standard suggested

FOODS	SUGGESTED PROPORTIONS	ITALIANS				POLISH				NEGRO			
		Group 1 (12)	Group 2 (12)	Group 3 (12)	Average	Group 1 (5)	Group 2 (15)	Group 3 (16)	Average	Group 1 (4)	Group 2 (9)	Group 3 (20)	Average
Grain products	$0.25	$0.22	$0.20	$0.14	$0.19	$0.24	$0.18	$0.20	$0.20	$0.27	$0.20	$0.16	$0.19
Milk and cheese	.20	.16	.15	.16	.15	.12	.15	.12	.13	.22	.13	.12	.14
Meat and eggs	.20	.30	.29	.28	.29	.40	.35	.32	.34	.17	.26	.28	.27
Vegetables and fruit	.20	.20	.22	.27	.23	.11	.15	.19	.16	.17	.19	.23	.19
Other foods	.15	.12	.14	.15	.14	.13	.17	.17	.17	.17	.22	.21	.21
Totals	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00

and fruit season. It is not difficult to forecast a much more serious deficiency for all groups during the winter months.

Other foods. Under this heading has been included the fatty foods, sugars, beverages and others. Rather interesting sidelights on characteristic group habits have been noticed. For example, the Italians invested generously in their beloved olive oil, the Polish only in a very limited amount of lard and practically no butter, and the Negro in a generous portion of lard, butter and oleo.

The Italians indulged in much wine, purchased either in large quantities or produced at home; the Polish registered an expenditure for root-beer by the case; the Negro a large expenditure for coffee and tea. An interesting variation was shown in the Negro dietaries where there seemed to be a consistent investment in jams and jellies and also a larger expenditure for sugar, itself. The Negroes spent a very large proportion for these other foods, namely, 21 per cent as compared with 17 per cent for the Polish and 14 per cent for the Italians, the two latter groups more nearly approximating the suggested standard of 15 per cent.

Contrary to the findings of Phillips and Howell secured during the war period of 1917–1918, the Negro dietaries appear to have a better distribution of the relative amounts invested in the different food stuffs, practically as good as the Italians, though the latter apparently secured a better value for the money invested.

FOOD VALUES OF DIETS

In briefly reporting the tendencies demonstrated by the different national groups in regard to the adequacy of their diets, the following information was secured:

Energy. The Polish dietaries were most strikingly deficient in energy, partly due to inordinately large families, no doubt, but also to their failure to invest a sufficient proportion of their funds in energy giving foods. It was found that 72 per cent of the Polish dietaries were inadequate as compared with 45 per cent of the Italian and 36.3 per cent of the Negro. The figures correspond closely with the 50 per cent deficiency reported by Phillips and Howell for their Italian families, but show an unaccountable decrease from 70 per cent to 36.3 per cent deficiency in the case of the Negro dietaries.

Protein. None of the dietaries were badly deficient in protein, the average being 23.7 per cent for the Italian, 19 per cent for the Polish, and 18.1 per cent for the Negro dietaries. The deficiencies for the Italian dietaries show an increase in deficiency of more than double the 9

per cent reported in the Phillips and Howell studies and a decrease from 37 per cent to 18.1 per cent in the case of the Negro dietaries.

Calcium. The percentage deficiency in calcium was found to be greatly less both in the Italian and Negro dietaries than that reported by Phillips and Howell. The average deficiency for the Italian dietaries was 29 per cent as compared with 51.7 per cent in 1918, and 27.3 per cent for the Negro as compared with 59.2 per cent in the earlier studies. The average calcium deficiency for the Polish families was 27.3 per cent.

Phosphorous. The deficiency in phosphorous was found to be 42.1 per cent for the Italian diets, 47 per cent for the Polish and 24.2 per cent for the Negro families.

TABLE 6

Percentage of families receiving less than standard allowance of food value

ITEMS OF FOOD VALUE	STANDARDS	PERCENTAGE OF FAMILIES RECEIVING LESS THAN STANDARD ALLOWANCE		
		Italian (38)	Polish (36)	Negro (33)
Calories	3000	45.0	72.0	36.3
Protein	75.0 grams	23.7	19.0	18.1
Calcium	0.68 gram	29.0	41.0	27.3
Phosphorus	1.44 grams	42.1	47.0	24.2
Iron	0.015 gram	29.0	44.0	17.4*

* Averaged exclusive of Huntington, W. Va., figures which were incomplete.

Iron. The dietaries showed a marked decrease in iron deficiency as compared with the war-period studies. Only 29 per cent of the Italian diets were lacking in iron as compared with 48 per cent in 1918, and 17.4 per cent of the Negro as compared with 62.9 per cent in the earlier studies. It was found that the Polish diets showed double the deficiency of the other nationalities or 44 per cent.

CONCLUSIONS

It is evident, even with the limited scope of these studies and their probable inaccuracies, that education in proper food selection is greatly needed in these homes where the adjustment of old dietary customs to new environments is made necessary. However, as was stated in an earlier article, it is evident that an adequate amount of food to supply the necessary food requirements is difficult or impossible to obtain in families large in number and limited in income. Without doubt the field worker in nutrition can render an invaluable service in aiding the mothers in these homes, as they struggle with the problems involved in providing three meals a day for their families.

COLLEGE EDUCATION AND THE FOOD SPECIALIST[1]

AGNES FAY MORGAN
The University of California

Before a rational statement of the value of college training to the food specialist can be given a definition of the latter term is necessary. What is a food specialist? Do we include the competent cook, the experienced grocery clerk, the food salesman and commission merchant? All these live by food service of one kind and another and must, through experience, obtain a working knowledge of the food products which they handle. But I doubt whether they or we would be likely to class them as food specialists. We have come to think of the specialist as one who has more than an individual experience as foundation for judgment, one who indeed through study and experiment has added to his own experience the organized and winnowed experience of the whole race. The specialist must be familiar with all the progress that has been made by intelligent workers in his own field in the past as in the present and in other countries and other literatures as well as in his own.

How can such a breadth of information be attained without well organized intensive and progressive instruction, such as now we find only in the higher institutions of learning? In particular the study of foods and nutrition can proceed only in a halting and artificial way without the use of well equipped laboratories and instruction by still further specialized instructors. Such provision is expensive and difficult to maintain, and can in fact be carried out satisfactorily only by a few well endowed educational institutions.

To illustrate the statement just made as to the need of specialized technical equipment and instruction in the making of the food specialist, one may cite almost at random from among the terms and the techniques of the subject. The measurement of food energy in calories is truly intelligible only to those who have carried out one or more combustions in a bomb calorimeter. The calculation of human energy output means little to those who have not taken part in the determination and calculation of one or more respiratory exchange experiments. Blood sugar

[1] Read before the California State Dietetic Association at Fresno, October 31, 1925.

figures are of either exaggerated or minimized importance to one who has not made a few quantitative blood analyses. The real meaning of figures for the alkaline reserve of blood plasma is lost to one who has not at least observed the technique of the Van Slyke determination. How much faith will a physician place in a dietitian's judgment as to the progress of an anemia case if he knows that she has never made a blood count and has no idea of the relative accuracy of the various hemoglobin determinations? This laboratory technique must, of course be supplemented by direct consultation of original articles and by competent criticism and discussion, such as is seldom encountered outside the university. Routine training in the hospital laboratory on the one hand and text book study without laboratory practice on the other hand can never supply the balanced view of nutrition as a science and its applications which should come out of this combined training in the impartial unhurried atmosphere of the university laboratories and libraries.

Those in authority with whom the dietitian has mostly to deal are scientifically trained medical men. They understand the language and respect the achievements of science, and are moved to acquiescence in its teachings as they are moved by no other force. Medicine can move forward only as fast as the laboratory scientist moves ahead of it. It is beginning to be admitted now and then that progress in medicine, particularly in the metabolic field is made, not by the clinician, but by the so-called impractical laboratory worker. Insulin came out of a university laboratory of biochemistry; the vitamin discoveries were likewise the product of nutrition research laboratories, as was the whole story of acidosis, and the iodine treatment of endemic goiter. The ketogenic-antiketogenic ratio, so important in the treatment of diabetic patients, was developed largely by organic chemists from test tube laboratory experiments. No practical medical man who is abreast of the times can any longer believe that fundamental training in the pure sciences, particularly in chemistry, physics, physiology and bacteriology is unnecessary in the education of the dietitian as well as of the physician. The dietitian who shows a clear and sound understanding of these principles and a first hand acquaintance with these laboratory practices will command the respect and the coöperation of the medical men with whom she works in a way impossible to the untrained worker. The dietitian must speak the language and practice the suspended judgment of the scientists whose findings she is using practically before she can hope to be counted among those who rank with officers in the medical army.

The four years' college course with bachelor's degree, which is just

beginning to be recognized in most parts of the country as the standard training for dietitians, will not long remain the final goal of the ambitious dietitian. We all know how inadequately prepared the young college graduate feels as she goes into practice in the field of nutrition. The very rigorousness of the course which she has taken has opened her eyes to the vast unexplored and marvelously interesting range of the subject which she has had no time to touch or even to speculate about. She is humble and eager to advance, and as the number of her competitors increases and the value of her services is better recognized, she will demand graduate training and a higher degree. What this training shall be and the character of this degree cannot as yet be clearly forecast. It seems evident however, that the trend of it will be toward the medical rather than the so-called practical side. Further practice in large quantity cookery, marketing and recipe development is not likely to seem necessary, if we may judge by the suggestions and requests for help which dietitians have begun to make. Instead, practice and theory of laboratory determinations in blood, urine, food, etc., study of the symptoms of disease, pathology of diseased tissues and clinical experience in the recognition of these conditions seem to form the basis of a growing demand for more medical training by the dietitian. This tendency further emphasizes the cleavage of the dietitian to the physician's end of the hospital table, and away from the nurse's.

Already the highest grade of nursing training involves three years of college and two years of hospital work, the physician's involves seven years of college and one year of hospital interneship, the dietitian's now requires four years of college and six months of hospital practice. I believe the time is not far distant when the graduate dietitian will obtain a distinctive degree such as graduate or doctor of dietetics or nutrition at the end of five years' college work and one year of hospital training. The year in the hospital should include the prosecution of a field or laboratory research in some dietetic problem. The progress in our knowledge of nutrition which would be facilitated by this requirement would in itself be worth while.

The five years of college work might well be distributed as follows: The first four years much the same curriculum as the first four years of the medical course, with the fifth year spent almost entirely on food and nutrition. The sixth or hospital year should allow for six months in the diet kitchen and six months in laboratory or field research under competent direction.

The four years undergraduate university work offered by the large and well organized institutions today is certainly adequate for the fundamental training of the dietitian if it is adequate for the training of the physician. It may be too soon to propose that dietitians' undergraduate work be given only in institutions in which a first class medical school exists, but the day is not far distant when such a proposal will be recognized as logical. The supporting scientific departments are not, in most cases, adequately developed where no medical or pre-medical course is offered.

The fifth or first graduate year of specialization in nutrition should contain the technical and advanced work in this field for which ordinarily the general medical course finds no place. At least 12 semester units of dietetics, 8 semester units of food economics and food analysis, and 6 semester units of food preparation should be included in this year. This constitutes the dietitians' main claim to professional superiority in her own field over the physician.

The planning of the hospital year bristles with difficulties. At present three to six months courses are offered by numerous hospitals to student dietitians without standardization, oversight or grading in any way. The whole matter is in the state of confusion out of which medical education has only recently emerged, in which nursing education, dental education and many other professional curricula are still floundering. No one can solve in a word this serious problem of the content of the hospital practice course. A few points however, are obvious. In the first place only a few well qualified hospitals should be allowed to offer a practice course to student dietitians. Perhaps 6 in California would be entirely adequate to meet the need. These few hospitals should be required to meet certain standards as to personnel and equipment of diet department. Competent inspection and grading of these schools should be the function of an authorized committee or official of the State Board of Health. Certain minimum essentials of the course should be outlined for all hospitals to cover. Of course a hospital which is connected with a first-class medical school is in a better position than others to fulfill these requirements. However, it may be too soon to demand that only hospitals of this kind be allowed to train dietitians.

Certainly the second six months of the hospital year of the student dietitian can be pursued only where university methods are in use and under the supervision of an educational institution competent to develop and judge research and to confer higher degrees. This might mean in

some cases transfer from the diet department of a hospital to a clinic medical school, research laboratory or another hospital at the end of the first six months of the sixth or hospital year of the dietitian's training.

I do not for a moment believe that it will be possible in the next twenty-five years to establish this standard of education for everyone serving in the diet departments of our hospitals and other institutions. The time will come far sooner, however, when a few able leaders will attain this standard, and will gradually elevate by it the whole level of the profession.

REPORT ON COLLEGE COURSES FOR PROSPECTIVE DIETITIANS

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In presenting a report of your committee as to a standard by which institutions preparing pupil dietitians may be classified it is necessary to give somewhat in detail the constituency of the committee and division of work assigned to each member. The study of existing conditions was detailed as follows: the evaluation of universities in the United States in regard to the work of training dietitians was studied by Miss Effie I. Raitt, head of the Department of Home Economics in the University of Washington, Seattle, Washington; a similar study with regard to the Land Grant Colleges was made by Dean Jean Krueger of the Michigan State College; the evaluation of the work of the colleges and universities of Canada was made by Miss Annie Laird, head of the Department of Household Sciences at the University of Toronto; and a study of the four year courses was made by the chairman of the committee after a study of the three reports that were submitted by the other members. There was no opportunity for the members of the committee to pass upon the report that is submitted for use by the hospitals in selecting pupil dietitians from four year college courses.

This final report which is submitted is based on actual courses now offered in the Land Grant Colleges and in part in the universities other than those affiliated with the Land Grant Colleges. There were nineteen of the Land Grant Colleges who reported on the training of dietitians. The study was made very largely from the 1925–26 catalogues. In a few cases the 1924–25 catalogues were used. From the universities other than those associated with the Land Grant Colleges one hundred and three were asked to coöperate; six offered no home economics courses, fifty-five did not reply, twenty of those replying had prescribed courses but of those only three met the higher requirements as presented in the 1921–22 Report while nine conformed to the second basis. In the other universities the deficiency was slight. In two institutions physics was omitted.

Realizing the difficulty of evaluating any course of study on the basis of the catalogue record only, it seemed wiser not to prepare at this time a list of the universities and colleges on a classfied basis but to present to the Association a form for standard grouping which could be sent out from the hospitals to the colleges applying for the privilege of dietitian interne training, allowing the hospitals themselves to evaluate the students applying on the basis of the answers given on the blank sent to the college or university departments or department; thus classifying the students on the basis of the "A,B,C" standard dependent on course elected while resident in the university. In making a standard group with relative hours in each group the bulletin on "Home Economics Curricula in Land Grant Colleges" presented November 13, 1924 by Dean Jean Krueger of Michigan State College was used so that the major group offering training for dietitians in their college courses would be able to conform with little serious change in their program.

BASIS FOR CLASSIFICATION OF EDUCATIONAL INSTITUTIONS PREPARING PUPIL DIETITIANS

The following form is recommended for use by the Hospitals in selecting pupil dietitians.

Total hours or credits required for graduation.....

The Standard Groupings and relative hours taken in each Group in collegiate training for dietitian majors are as follows for Class A:

I. General (required and elective): (50 per cent of total hours for graduation)

hours taken

English..... ———
History..... ———
Language-foreign..... ———
Economics..... ———
Sociology..... ———
Psychology..... ———
Education..... ———
Art..... ———
Total hours taken..... ———

II. General Sciences: (20 per cent of total hours for graduation)

hours taken

Physics, general..... ———
Chemistry, General..... ———
Chemistry, Quantitative..... ———
Chemistry, Organic..... ———
Chemistry, Physiological..... ———
Biology, General..... ———
Biology, Bacteriology..... ———
Biology, Physiology..... ———
Total hours taken..... ———

III. Home Economics: (30 per cent of total hours for graduation)

hours taken

(a)
- Foods
  - Food study and preparation.....———
  - Food economics.....———
  - Experimental cookery.....———
- Textiles—Chemistry and Economic Problems.....———
- Housing and Sanitation.....———
- Nutrition and Dietetics .....———
  - Normal.....———
  - Dietotherapy.....———
  - Experimental feeding of lower animals .....———

(b)
- Institutional Courses:-
  - * Large Quantity Marketing and Preparation
  - * Management and Cost Accounting
    (Tea room, cafeteria, restaurant)
  - Equipment study and practice in use
  - Organization and administration
  - Laundry

IV. Graduate Courses—Graduate School
- Advanced Physiology and Anatomy
- Clinical Diagnosis
- Hospital Practice (pupil dietitian)
- Research in effects of special diets
- Child Nutrition:
  - Nursery school studies
  - Speech defects studies
  - Malnutrition studies

QUALIFICATIONS FOR EACH CLASS

A class. Student has met all the requirements in undergraduate courses.

B class. Student has taken:
- More in General Subjects
- Less in Science (lacks one or more of the following: physics, quantitative chemistry and organic chemistry but has taken food chemistry)
- Has taken the same as Class A in Home Economics courses.

C class. Student has taken less in General Courses
- Student has taken less in Science Courses
- Student has taken more in Home Economic Courses.

* Starred courses should be included in Class A; other courses optional.

The reasons for making these groups are as follows: in the first group called General we have asked that at least one half of the undergraduate work be carried in courses that are very definitely standard courses in the general education of any college student. They are the liberalizing courses which in a well rounded education should count as a basis for all personal culture as well as a better understanding of the past and an appreciation of the future. Fifty per cent should be the minimum taken in undergraduate courses.

The second group under the General Sciences includes only those that

are fundamental in understanding the problems of the work of the modern dietitian who must know her physics, chemistry, and biology. The minimum amount possible and the average amount that is usually offered is twenty per cent of the total hours for graduation. These are not specialized courses but general foundation courses that are offered in all high grade colleges and universities.

The third group, the Professional group in home economics, will include the remaining thirty per cent of the total hours for graduation. In the detailed division under the subjects outlined, the custom of the various colleges conformed fairly well to the division as suggested in the previous report made by your committee.

The graduate courses offered in recognized graduate schools should be those that are technically required for the work of the dietitian in coöperative work with the medical group and the nursing group. The three working together in a hospital should be able to talk each others' language and evaluate their work in terms of the other groups so that the patient for whom the hospital is established will receive maximum care.

The classification into the three classes has been made after very thoughtful discussion with groups of people who have been engaged in training students in colleges and with those giving additional training in hospitals. With such a classification it seems to the chairman of the committee that it will be possible for the American Dietetic Association to insist that the future dietitian shall be a graduate of a four year college course, with, if possible, graduate credit beyond the four year requirements, but for the present to make a very definite stand for future dietitians on the collegiate degree basis as a minimum requirement. It is with that hope that the standard groups and classification are submitted by the chairman of the committee on training dietitians of the Association.

AN ACCREDITED COURSE FOR STUDENT DIETITIANS

EVA THALLMAN

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In order to locate ourselves, as it were, before we start a report, it is always well to profit by the builder's example and explore our surroundings and actual foundation, then when we proceed with construction, the task will be easier. To go back only as far as the American Dietetic Association Bulletin two years ago, we find that the Administration section conducted a very interesting and helpful survey of hospitals on the "Status of the Dietitian." I wonder how many of us refer to that report as a source of information or as a spur to our vacillating ambitions. The plea of the Section on Education for better preparation of the dietitian gave a definite impetus to the present survey. Last year a survey was made by the Administrative Section on "Organization and Maintenance of the Hospital Dietary Department" and this report touched upon the student group as a part of the organization. The Section on Education, continuing its study of the course for student dietitians, contributed a condensed curriculum, which has furnished a foundation for the present report.

Our reserve store of useful data is further augmented by the contributions of our speakers who have suggested our duties and responsibilities. To shorten this preliminary review it seems that we, as an organized group, have a marvelous opportunity to build up the value of our profession through helping to select the future dietitian. Having been as careful as we can in making this selection, let us proceed to use all the means which we have at our disposal to fit her as completely as possible for the profession which she has chosen. In other words, with our practically trained judgment, we should be able to help the college decide what her preparatory education should be, and then surrounding her with a professional atmosphere, should take her training as a serious responsibility. If we have not the facilities to give her her just dues, are we fair to the profession if we take her on as a relief worker, and then insist that she be called a graduate dietitian?

But let the survey answer some of our questions for us. This report is based upon a survey conducted by the Section on Education of all

hospitals of 100 beds or more in the United States and Canada, who maintain an accredited school of nursing. The purpose of this survey was to obtain information as to what these organized hospitals are now offering in their courses for student dietitians.

As there has been no detailed curriculum suggested by any organization for this branch of hospital training we naturally expected to find the returned questionnaires would outline courses as varied as personalities. We have compiled a report on the questionnaires and from this have also made a preliminary attempt to outline curricula of two different grades, to one of which the average hospital should aspire.

There were 839 questionnaires sent out and 310 replies have been received. Two hundred and forty of the replies have stated they offer no course for student dietitians, and 70 outlined their courses.

HOSPITAL ORGANIZATION

Student training, being primarily based on practical applications, would be influenced by the hospital organization. Of the 70 hospitals under consideration, 58 classify as "general," thereby suggesting ease of planning a varied course; only particular types of patients were admitted in six, such as children, women, adults only, and the remaining six failed to state type of hospital.

The number of salaried dietitians is evidently governed by some condition other than the capacity of the hospital as there may be one dietitian in a hospital of 130 beds or in one of 500 beds. Again there may be three dietitians in a hospital of 175 beds or the same number of dietitians for a hospital of 600 beds. These are extreme cases, yet enough others were found near these extremes to warrant the comparison. One hospital failed to give information, but of the remaining 69 there were 39 or about 57 per cent who had either one or two dietitians. The greatest number of salaried dietitians reported in any hospital which has a student training course was ten, and this number was given in only two instances, once where the bed capacity was 700, and again where the capacity was 1200.

Little information of value to this survey was obtained with regard to summarizing the duties of salaried dietitians.

ORGANIZATION OF COURSE FOR STUDENT DIETITIANS

Turning more specifically to the organization of the course for student dietitians, the minimum age requirement was given as eighteen years in 5 hospitals, nineteen years in 4 hospitals, twenty years in 19 hospitals,

twenty-one years in 15 hospitals, and twenty-two years in 6 hospitals. The remaining 21 hospitals either made no restriction, or did not answer the question.

Granting that college training is a very important, if not a major item, in fitting the student for the profession, the replies to the question of minimum training are worthy of serious consideration. In 12 instances a degree was definitely required, 8 of which were specified as Bachelor of Science, 4 others required a four-year course; one a three-year course, and 26 stated a two-year course was their minimum requirement. Two failed to make a statement and of the remaining 25 which were left unclassified, there were 17 who stated they required that students be graduates but failed to give the length of term.

The number of students enrolled varied from one to ten. There were 20 hospitals who had only one student; 23 who had two; 3 who had three; 8 who had four; 2 who had five; 6 who had six; one who had 7; 1 who had eight and 3 who had ten. There were three hospitals who did not state definitely the number of students enrolled. As the 59 hospitals giving definite information on both length of course and number of students training 394 graduate dietitians yearly, there would seem to be no immediate shortage unless the "turn-over" becomes excessive. The number of students enrolled could not be said to bear any definite relation to bed capacity and very little to the total number of salaried dietitians.

In length of course 50 per cent or 36 in number require six months. The shortest period of training required was three months in 12 hospitals; four months was required in 19 hospitals, nine months in 3 hospitals, and this was the maximum except in two instances where the shorter courses included in the above list, might be extended to one year.

Considering "board, room, and laundry" to be full maintenance, we found 56 out of the 70 hospitals, or 80 per cent which were giving this form of encouragement to the student dietitian. There were 17 of these 56 which also gave an additional allowance of $5 to $25. Of the remaining 14 hospitals there was 1 which gave board and room; 9 which gave board and laundry, 1 which gave an allowance and meals; 1 which gave rent allowance; 1 which gave a small allowance only; and 1 which allowed nothing. In two instances, classified above as part maintenance, the allowance seemed sufficient to warrant the term "full maintenance." This question of maintenance bore no relation to the size of the hospital or the number of students.

With regard to the question of rank of the students in the hospital personnel, there was enough diversity to make answers interesting. We

find that she may be classed with pupil nurses, senior nurses, graduate nurses, internes, assistant to the dietitian, as a member of the staff, or she may be "professional help." In several instances she is evidently not included in the hospital group, but kept separate with the rank of a student.

There were only five instances of extremes in hours of duty, one which requires only thirty and four which require over sixty hours per week. In fifty-two instances, the weekly average is between forty-eight and fifty-four hours.

CONTENT OF COURSE

It was rather difficult to make out a questionnaire on content of course, which would cover all phases of the subject, and those who replied probably experienced the same difficulty in expressing the contents of their courses in terms which were not of their own choosing.

Summing up the routine work under the four divisions of General Kitchen Practice, Special Diet Practice, Out-Patient and Metabolism, the following assignments were stated: All but three required duty in general kitchen practice; duty in some part of Special Diet practice was required in every instance; credit was given to metabolism work in 34 instances; and to Out-Patient assignments in 20 instances. No Out-Patient Assignment was given in 27 instances and no work in metabolism was given in 39 instances. The length of time spent in General Kitchen Practice and in Special Diet Practice was asked. In the General Kitchen or Administrative Practice, there were 3 who gave less than one month as the assignment; 17 who gave one month; 20 who gave six weeks to two months; 7 who gave nine weeks to three months; and 2 who gave four months. The four-month assignment was required in one instance in a six-months course and in the other in a nine-months course. In this item there were twenty-one who were left unclassified.

In Special Diet Practice, or corrective diets, there were 4 who gave one month as the assignment, 20 who gave six weeks to two months; 12 who gave nine weeks to three months; and 3 who gave four months. The four-months assignment was required in two instances in six-months courses, and in the other in a nine-months course. In this item there were twenty-four who were left unclassified.

The question of the student assuming entire supervision was asked both in General Kitchen and Special Diet Practice with replies of forty-two instances of this assignment in General Kitchen and 38 instances of this assignment in Special Diet Practice. About 50 per cent of these assign-

ments were in the form of relief for the salaried dietitians in the General Kitchen or Administrative work and 35 per cent for this purpose in the Special Diet division. Practically all of the remainder were for periods of one week to one month.

Of the group numbering 40, who had been classified in both divisions of duty, there were 15 who divided their time equally, 6 who gave more time to the General Kitchen Practice and 19 who required that the greater time be spent in Special Diet Practice.

Students were required to plan menus in every hospital except 7. Two out of this 7 planned for patients only.

It was generally given as a duty that the students supervise employees in food preparation and distribution, there being 50 who required this supervision in food preparation and 58 in food distribution.

In 36 hospitals, it was a duty of the students to calculate and record costs, a definite denial of this duty was made in 28 hospitals, and 6 did not state a requirement.

The methods of acquainting students with Hospital Organization were given as observation, round table discussions, lectures, conferences with heads of other departments, field trips, attendance at staff meetings, office experience and references. In reply to this item seventeen either failed to state method or employed none.

Kitchen organization and operation was taught by contact, demonstrations, discussions, assignment of supervision, note book records, field trips, recourse to office records. No report was given on this question in seventeen instances. Installation and operation of equipment received replies of actual practice in using, observation, instructions from dietitian and chef, daily reporting of repairs; field trips and kitchen planning. There was no answer to this question in twenty-six instances.

Marketing was taught by conferences and trips with the buyer, and office experience including requisitions and buying under supervision. There were 24 did not give information on this point.

Store-room management was taught by giving as an assigned duty, weekly inventories, requisitioning, observation, and discussions. This question was not considered in twenty-eight replies.

Cost Control was considered from the view-point of menu-planning, budget systems, lectures by dietitians and stewards, access to records, daily contact with problems, actual cost accounting of per capita sheets. No answer was made to this question by 30 hospitals.

Attention was given wage scales by office work including keeping of

payroll, familiarity with employees' wages; lectures, and in one instance by actual experience in employing kitchen personnel. Replies were not received from 32 hospitals.

Requests for statements of other duties under the division of General Kitchen Practice added such items as checking breakage, commercial cafeteria assignment, actual work in food preparation, keeping detailed notebook records, checking food waste, affiliation with administrative departments in other hospitals and contact with institutional housekeeping and laundry.

SPECIAL DIET PRACTICE

Without an exception, every hospital required its students to plan and calculate special diets. Supervision of pupil nurses is delegated to student dietitians in 62 hospitals, is not permitted in 2, and is not stated in 2. Student dietitians are required to observe food service on the wards in 57 hospitals and are not required to in 9 and 4 failed to state. Interpreting patients' charts and records was a requirement in 48 hospitals and not required in 22. All but 2 hospitals required the students to visit patients on the wards but the privilege of interviewing and instructing was not quite so generally given. They might interview in sixty instances and instruct in forty-two instances. There was an equal division of affirmative and negative replies with regard to the student receiving instruction from the physician in charge. The question of Out-Patient assignment received replies of such duties as planning and calculating diets, receiving and recording patients' reports, teaching the patients through concrete examples, urinalysis, general observation of nutrition clinics and visiting in the patients' homes.

Referring to the request for any other duties that might be enumerated under Special Diet Practice, infant feeding was the most often mentioned. Others were actual preparation of food for special diets and for private patients; affiliation with other hospitals in order to give more varied course, and work in urinalysis. There were 22 who listed under this heading.

TEACHING

Training or helping the student dietitian to prepare herself as an instructor of dietetics for pupil nurses would seem to be one of the most difficult problems. We consider the college responsible for her methods of teaching, but colleges would have to specialize much more than is now desirable, before they could decide on content of such a course. There

were 12 hospitals who failed to give a statement regarding the type of training. The remaining hospitals gave instructions regarding the securing of the outlines furnished either by the State Board of Nursing Education, by the American Dietetic Association or the outlines in use in the individual hospital. In 14 instances the student was required to practice teaching if classes were in session. Observation of class work was required in several cases, and planning a lesson or outline was required in 9 hospitals.

OBSERVATION AND STUDY

In reply to the questions concerning observation and study, there were 50 per cent or less who gave the student time for study and outside observations of various kinds. Field trips were permitted in 41 hospitals and varied in number from three to twelve with an average between six and seven. Time was not always allowed for these field trips. The requirement was made in 46 hospitals that students read periodicals of professional interest and in 13 the requirement was not made. Of the 34 who gave source of supply, 4 depended upon the department office and the remainder were furnished by hospital and medical libraries.

Students were required to attend lectures by supervising dietitians in 39 hospitals and by doctors in 36. The average number of lectures which were planned was stated very indefinitely. There were 26 instances in which the average number received from dietitians was stated and this number varied from as few as 4 to as many as 48. The number given by doctors was stated in 22 hospitals and varied from 4 to 24. In several hospitals the student dietitians also attended the medical lectures originally planned for the pupil nurses.

The students were required to become familiar with laboratory technique by observation in 30 hospitals and by actual performances in 15. Observation of laboratory technique was not required in 23 hospitals and actual performance was not required in 33 hospitals.

Out of the 70 hospitals there were 22 who required a written survey of some special problem. There were 31 who did not and 17 failed to state. The request for statement of additional duties which would classify under this section of the survey brought responses in several instances of a requirement that students attend the local meetings of the dietitians. In 2 instances the students made reports at stated intervals.

We closed the questionnaire with a request that the most important features of the course as given be listed. This part of the survey would

reassure us of the loyalty which those reporting had for their departments. Practically all answered. Special diet work seemed to hold first rank in 20 hospitals and general administrative work was given predominance in an equal number of instances. Others valued their course because of weekly conferences or of metabolic work, or because they were able to give training that would adapt the student to the small hospitals. Still others considered their centralized departments as an asset, and contact with a medical school was stressed in some cases. In 1 or 2 instances the teaching of racial diets was given precedence.

Fifty-four questionnaires were submitted by dietitians and 13 by the Superintendent. Three failed to give a signature.

In closing this report may I express our appreciation of the coöperation and messages of encouragement which we have received. I doubt if any summary can be made. We value all divisions of the work, and it is hard to decide what are the most important features from a general view-point.

BUDGETING THE DIETARY DEPARTMENT AND PURCHASING FOOD SUPPLIES

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The yearly budget for a hospital is obtained by totaling the budgets prepared by its many departments. In this process the dietary department plays a very large part and is responsible for about 35 per cent of all expenditures. To produce an efficient budget for this department a careful study of the hospital activities is essential as any change in the care of patients or an increase or decrease in number of admissions will at once be reflected in this part of the organization.

The budgeting of the dietary department in a new or old hospital differs only in that the old institution has figures and experience to serve as a guide. The following divisions must be considered in the budget of each; food stuff, help and equipment.

To arrive at a figure to cover the cost of food supplies a study of the past years requirements will give a fairly reliable basis for working out the coming years needs. Usually the budget for the approaching year is prepared before the end of the current year, and because of this, figures for only a part of the year are available. In such a case the average expenditure per month for the year multiplied by twelve will give a satisfactory approximation for the entire year provided the year is far enough spent to insure a reliable monthly average. A new hospital without any previous experience will do better to use figures compiled by a similar institution than to undertake to estimate the total of its food requirements.

Some hospitals keep an accurate record of the days board cost. There are two ways by which this is done, each requiring a record of the number of meals served patients, doctors, nurses, officers and help. The first one, which to me seems the best, is to total the amounts of the requisitions to the commissary each week, month and finally for the year and divide this figure by the number of days board. The second method is to divide the total dietary purchases for any period by the days board. It can readily be seen if this method is employed, that the cost of the days board for a given period would be high if the purchases during that time hap-

pened to anticipate future needs. There would of course be a decrease later on while these purchases were being consumed. By this method a dependable result can only be obtained by giving consideration to several months. Experience has shown that the result obtained by either method will be very similar for a period of one year.

The days board cost for each year will vary, but will serve much better in the formation of a budget than an estimate on the probable value of food stuffs delivered during a future twelve months when these products have not been harvested and in many cases not even planted. With the cost of the days board established, the problem resolves itself into estimating the number of persons to be fed. Here a knowledge of the hospital's activities is necessary. If no change is expected, the number of days board times the cost gives the total expense for food supplies. If an increase or decrease is anticipated a proper addition or subtraction must be made.

The total salaries of the department is the next item to be considered. Here again the past years figures can be used advantageously. These figures with slight alterations to care for increases or reductions will serve, unless changes are to be made in the organization. If there are to be changes, allowances must be made to care for them. In the case of a new institution it will be necessary to list the personnel of the department and total their salaries.

The expenditure for equipment is the most difficult to estimate. Breakage and replacement of equipment daily undergoing severe usage must be high. Breakage of glassware, china and pottery each year will amount to nearly 100 per cent. Replacement of equipment for one year will be much larger than for another, and there is no way to accurately foretell the cost. To obtain a figure for these items the head of the department must use her best judgment and list for replacement the most probable articles and obtain their present market prices. If considerable patience and enough diligence is used the figures obtained will be accurate enough to be valuable. For the initial equipment of a dietary department including kitchens, dining rooms, and serving pantries, it has been estimated that about 3 per cent of the building cost will be required.

The items of light, fuel, power and water are not usually proportioned to the various departments. If it is desired to obtain the dietary department's part of this expense, meters should be installed. Usually institutions combine these items for all departments into one heading in their budgets for the year.

The total of the accumulated figures will give the dietary expense budget. One-twelfth of this amount will be the monthly budget and this is the goal at which to aim. A graph using the monthly budget as a horizontal line and recording the monthly expenditures above or below this line shows with what success the dietitian has kept within her budget (fig. 1). Should any month exceed the budget, the patients should not suffer during the following month through a sharp reduction, but there should be a moderate reduction over several months; neither should a program of extravagance be adopted in case one month happened to be well under the budget.

It will be found that the budget estimates will hardly ever correspond with the expenditures, but if they are conscientiously worked out, enough accuracy will be obtained to aid materially in anticipating future

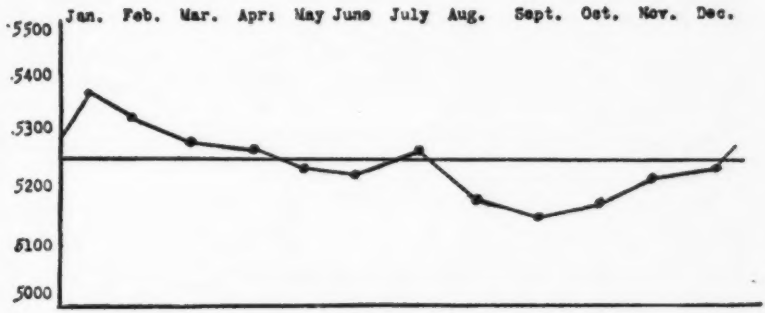

Fig. 1

needs to enable the administrative officer to adopt a definite system along which to proceed.

Whether the dietitian or a steward is the best suited purchasing agent for dietary supplies is debatable, and no attempt will be made here to decide the question. The point to be emphasized is that the purchasing agent must be a person of experience in food supplies and of good business judgment. If such a person is not in charge of the commissary department, the institution will suffer a large financial loss in addition to the deserved stigma of unpalatable food.

It has been said that an institution should never purchase an item, not even one so small as a single lead pencil without obtaining competitive bids. Such a rule cannot be adopted in its strictest sense but the thought implied is unimpeachable and should most certainly be put into action in the purchase of dietary supplies.

The simplest and most practical way of obtaining competitive bids is for the steward to prepare, the first of each month, a list of all commodities needed by the department. The preparation of this list is very much simplified if use is made of the perpetual inventory system as it will show at any time the correct amount of each article on hand. A copy of the monthly requirements is sent regularly to three or four reliable firms and their bids invited. It is not desirable to have more than four firms submitting bids as the proportionate part of the order received by each will not be large enough to create much interest. Furthermore, by limiting the number it can be restricted to first class business houses, who will soon realize what your requirements are, and know that only first class merchandise will be accepted. In submitting the list for quotations, be definite in your statement describing each article, but let it be known that you are always open to considering a good buy even though it does not conform to the specifications and provided it is first class. When all quotations have been received a clerk should tabulate them so that a glance at the tabulated sheet will tell how the orders are to be placed.

The same procedure should be followed in purchasing when it becomes necessary to make purchases during the month.

The order should be made in triplicate. One copy going to the vendor another to the book-keeping office and the third retained by the purchasing agent. Care must be exercised in giving a definite description of the article and it is well to have printed on the order blank that unless otherwise stated all orders are given on a delivered basis. The receiving clerk should receive no more information than that a certain article has been purchased. Upon its receipt he is to send to the purchasing agent the amount and kind of material delivered. If he has had no previous information as to the amount and description of the material, his check on the delivery will be more accurate than if he knows what was expected. If the memorandum from the receiving room corresponds with the order, the purchasing agent o.k's and sends the bill to the book-keeping department for payment.

In buying hospital supplies an alphabetical card index of all purchases will prove most valuable to the purchasing agent. When an item comes up for purchase, by referring to this index, a glance will tell the kind, price, amount and the source of previous deliveries. This information is most useful in determining the next order, and at the end of a given period the total amount purchased of any one article, as well as the total cost, can be determined with minimum effort.

When buying canned goods, much careful discrimination must be exercised. Through the efforts of the National Canners Association, certain standard grades and definite specifications as to quality and weights of canned goods have been drawn up and have been accepted by nearly all canners. In order that each firm may clearly understand your wants, it is well to give the Association's specifications in asking for bids. Then the order should only be placed after a detailed study of samples and never on brands. Certain institutions have worked out an excellent system of having 3 samples of each article submitted by each bidding firm. The purchasing agent opens one can of each item from all the firms and through the process of elimination the best buy is obtained. First the solid content and the juice in each sample is weighed. Then a careful inspection of contents is made. Any sample not bearing inspection is discarded. The next step is tasting. Only those samples which are of the desired flavor and quality can be considered. This last step in most cases will narrow the field down to only a few samples. The best buy of these is then determined by price and weight. Here price alone cannot be the determining factor as one sample of equal flavor and appearance, and costing more may have several ounces more solid content and prove the most economical.

After the selection has been made, all samples from the unsuccessful bidders are sent to the kitchen to be used as needed. The two remaining samples submitted by the successful bidder kept. One is opened when the order is delivered and compared with one or more cans of the delivered article. The other is kept for future comparison should it be required.

The safest way to purchase fresh fruits and vegetables is to visit the market and see what is offered. To do this two-half days each week will be required, but the time spent will declare large dividends. The party making the purchases should inspect them at the time of delivery and refuse to accept any item that does not come up to the sample seen at the market. The quantity should be checked up by comparing with a list furnished by the local sealer of weights and measures. This list gives in alphabetical order the weight of a bushel, peck and quart of practically all materials sold by dry measures.

Most institutions have found it advisable to purchase meats only after inspection in the packing houses. When a carcass or quarter has been selected it can be marked with indelible ink and thus assure the purchaser that his selection will be delivered.

It is well to follow a few general rules in purchasing meat.

Beef should be cornfed steers weighing about 800 pounds, well rounded in hind leg and loin and with plump forequarters. The suet should be well distributed. The inside of the ribs should have a sufficient layer of fat and the meat on transverse section should be cherry red and show a general mottling of fat. The pelvic bone of young animals will show a softer cartilage than that of old animals. If buying only hind quarters choose the left side, if other things are equal, as the kidney suet on this side is several pound lighter.

Many of the general statements made in regard to beef apply to lambs, mutton and veal. Dressed mutton should weigh 65 to 70 pounds. Lambs should weigh 35 to 40 pounds. Genuine spring lambs show a square surface covered with cartilage when the second joint is broken, and after removal of the hoof the end of the bone will show a notched surface covered with cartilage. In older animals this covering will be missing. Veal should weigh 80 to 100 pounds and be four to six weeks old.

While pork is not used by hospitals in as large amounts as other meats, it appears on the menus often enough to warrant consideration in its purchasing. Cured pork is used more than the fresh and each packer will have his own method of curing, giving a slightly different flavor to his product. Choice of these flavors must be made and the most suitable selected, always bearing in mind a few general points. Bacon with two strips of lean is considered best. This is characteristic of the bacon from male hogs and is seldom found in that of the female. Hams weighing about 12 pounds have been found to be the best. Fresh shoulders weighing 8 pounds and loins weighing 8 to 10 pounds are the most satisfactory cuts.

Fresh eggs are one of the most difficult items to purchase. Produce houses have developed a grade of eggs called hotel eggs and these, while not strictly fresh are of a very good quality. By paying a premium of a few cents a dozen over the market price, hospitals can buy eggs direct from the producers. To secure the best results by this method, the entire output of the producer should be purchased, with the understanding that the eggs will be shipped at least every other day, or if practical, every day. This will guarantee eggs not over two days old. The producer must also agree to supply nothing but infertile eggs during the warm months. Immediately upon arrival at the hospital, the date should be stamped on each egg together with the initials of the party from whom it was purchased. This will require only a few moments work each day and is a mark of identification. By watching the dates on the eggs,

the dietitian can always tell if they are fresh. While infertile eggs can be kept in cold storage for a week or ten days, it is advisable to so regulate the source of supply so that never more than enough for two or three days use will be on hand, and if they are used in the order of their arrival, the eggs are certain to be fresh. The simplest and a very accurate way to determine the freshness of an egg is by the air cell. At the time of laying, the air cell is very small. Due to evaporation of the moisture in the white, it increases in size with age. Eggs with air cells of more than seven-eights inch in diameter will not grade number 1.

It is possible for fish markets to make satisfactory deliveries at great distances. The fish if fresh, will have no pronounced odor, the flesh will be firm, gills red in color, eyes protruding and bright and the scales will be adherent to the body.

A substantial saving can be accomplished by investigating and buying in bulk many articles such as cereals. In most instances the bulk product will be of equal quality to the advertised package article and the price considerably less. Care must be exercised in cleaning the storage receptacles before each fresh supply is received, and in buying only sufficient quantities for short periods in hot weather.

In the purchase of dietary supplies, it is possible occasionally to make large savings by buying when the price and market is favorable. As a general rule, however, it is unwise to attempt to anticipate future needs for any great length of time.

A CHECKING SCHEME FOR RECORDING SPECIAL ABILITIES AND QUALIFICATIONS OF STUDENT DIETITIANS

By the Assistants and Student Dietitians of Peter Bent Brigham Hospital and Amalia Lautz

In writing the records of student dietitians and especially in referring to records for purposes of recommendation of former students, a need was felt for greater definiteness, balance, and simplicity in final summaries of ability and capacity. After discussion by the department leaders, the matter was put up to the student dietitians themselves in the weekly group meeting of students, assistants, and head.

The student dietitians with a minimum amount of criticism and suggestion prepared the following record scheme for abilities of student dietitians. It can be used alone for a final record sheet or better in connection with a paragraph or two of summing up of points not emphasized, or of general impression.

Qualifications of a Dietitian

		I	II
Personal	Good health		
	Ability to handle people		
	Interest in work		
	Poise		
	Good appearance		
	Courage		
	Common sense		
	Adaptability		
	Business ability		
Training	Knowledge of fundamental principles		
	Education — General		
	Education — Technical		
	Accuracy		
Specialized ability	Administrative		
	Technical		
	Therapeutic		
	Teaching		
	Scientific		

Mark with a check (√) in column I the primary qualifications, and in column II the secondary qualifications.

RESIDENCE HALL JOB ANALYSIS

ELIZABETH BEMIS,[1] LENNA COOPER[2] AND MARY WALTON[3]

I. NUMBERS UPON WHICH SUMMARIES ARE BASED

Questionnaire sent to 59 colleges and universities.
Questionnaire answered by 37 colleges and universities. 3. colleges do not maintain residence halls.
Summary based on answers of 34 colleges and universities.
111 residence halls maintained by these 34 schools.

II. SUMMARY OF QUESTIONNAIRE FOR OFFICE OF DEAN WOMEN

Questions	*Answers summarized*
1. Number of residence halls for women students?	1 and 2. Answers do not indicate any relationship between number of residence halls maintained by the colleges and the number of women enrolled.
2. Number of women students registered?	
3. Number of students per hall (average)?	3. 29, residence capacity less than 50. 26, residence capacity 50–100. 20, residence capacity 100–150. 8, residence capacity 150–200. 1, residence capacity 240. 7, residence capacity 250. 1, residence capacity 360. 19, capacity not stated.
4. Are all women students required to live in halls?	4. 28, no. 4, yes (women's colleges). 2, did not answer question.
5. If not, what exceptions?	5. 20, students (living at home, living with relatives, working). Sorority members. 2, graduate students. 4, sophomores, juniors and seniors. 3, optional with students.
6. Are all residents required to board at residence halls?	6. 23, yes. 7, no. 4, did not answer question.
7. What exceptions if any?	7. 2, students working elsewhere. 2, sophomores, juniors and seniors. 1, capacity inadequate 2, special diets.
8. Cost of board per week?	8. 3—$4.50 3— $6.50 6— 5.00 1— 7.50 1— 5.25 2— 8.00

[1] Michigan State College.
[2] Battle Creek College of Home Economics.
[3] University of Michigan.

9. Cost of room per week?

9. 1—$5.50 1— $8.50
5— 6.00 1— 9.00
2— 6.25 1— 9.60
1— 0.00 4— 3.30
2— 1.00 1— 4.40
2— 1.50 2— 5.00
1— 1.75 2— 6.50
5— 2.00 1— 6.75
1— 2.50 1— 12.50
1— 3.00

5, gave room and board per week.
1—$5.65 1—$10.15
1— 9.40 1— 11.00
1— 15.00

2, did not answer question.

III. SUMMARY OF QUESTIONNAIRE FOR SOCIAL DIRECTOR OF RESIDENCE HALLS

1. Describe organization in your most representative hall.
List staff and give title.

Organization toward which all seem to be working:

a. Social Director, Student Officers, Night Chaperon.
Title may be Dean of Women. Head Director, Head Resident, Preceptress, Assistant Warden, Hostess, Chaperon or House Mother.

b. Business Director.
Title may be House Director, House Superintendent, Housekeeper, House Administrator, Matron, Service Manager, Dietitian, or Director of Dining Service.

c. Resident Nurse.

2. Indicate Officer responsible for following duties:*

	DEAN OF WOMEN	ASSISTANT DEAN OF WOMEN	SOCIAL DIRECTOR	NIGHT CHAPERON	BUSINESS DIRECTOR	NURSE	COLLECTING BUSINESS OFFICE	FACULTY MEMBER	Y. W. C. A.	W. S. G. A.	STUDENT ORGANIZATION
1. Room assignment	10	1	9		4		6				
2. Chaperoning	4		17	1				8			
3. Deviation of opportunities for unsocial girl	6		12						3		4
4. Responsibility for Dining room conduct			22		6						1
5. Planning of social functions	3		9							2	16
6. To whom is illness reported			19		11						
7. Supervision of housekeeping			11		19						
8. Care of guests in house			18		12						
9. Receiving money for room rent	1		1		3		27				
Receiving money for board	1		1		5		25				

*Summary based on 30 colleges. Some did not answer all questions.

IV. SUMMARY OF QUESTIONNAIRE FOR DIRECTOR OF HOUSING AND FEEDING

1. Housing capacity of your most representative hall for women?
   1. See II, 3.

2. Seating capacity of dining rooms
   2. 9—less than 100 1—350
      11—100–150 1—326
      7—150–200 1—1100
      11—200–250 1—450
      3—300 1—536
      1—313

3. Form of Meal Service?

3.	BREAKFAST	LUNCH	DINNER
Self serve	10	7	2
Table d'hote	23	26	32
a la carte	1	1	
Did not answer	13	13	13

4. Is there a central purchasing system?
   4. 19, yes.
      10, no.
      3, did not answer.

5. Advantage of this?
   5. Economy of time and money better selection

6. If no central purchasing system, who is responsible for selecting and placing orders for,*

	BUSINESS DIRECTOR	DEAN OF WOMEN	DID NOT ANSWER	SUPERINTENDENT OF BUILDINGS AND GROUNDS	JANITOR
a. Kitchen and dining room equipment	8 9†	1	1		
b. Furniture and furnishings	5	4	1		
c. Housekeeping supplies or cleaning	8 5†	1	1		
d. Daily food orders	9 9†				
e. Who has charge of repairs outside	5 7		4	4 3	1

* Summary based on answers from 32 schools; 47 dining rooms.
† In institutions with Central Purchasing system.

7. What officer is responsible for?

	DEAN OF WOMEN	SOCIAL DIRECTOR	BUSINESS DIRECTOR	COLLEGE BUSINESS OFFICE	STUDENT ORGANIZATIONS	NO BUDGET	LAUNDRY MANAGER	DID NOT ANSWER
a. Making out yearly budget for residence and dining room	4		17	8		2		1
b. Directing social life of students in residence	9	18	2		2			1
c. Checking bills sent to business office	4	15	11					2
d. Bookkeeping and accounting			7	22				3
e. Taking inventories of food house department			13	4				5
	2	3	16	2				9
f. Receiving money for room rent		1	5	23				3
Receiving money for meals		2	7	22				2
g. Engaging and discharging employees	1	2	20	3				6
h. Determining wages	1		20	8				3
i. Managing laundry		2	7			9	2	12

8. What are rates for room and meals?
   8, See II, 8, 9.
9. Do receipts from board include any expenses other than those connected with kitchen and dining room?
   9. 18, no.
   10, yes.
   4, did not answer.
10. If so what?
   10. 5, operation of residence halls.
   1, entertainment.
   3, salary for social director.
   1, care of grounds.
11. Daily cost per capita:
   11.
   a. by whom computed?
      a. 4, business office of college.
      18, business director of residence halls.
   b. how often computed?
      b. 8, monthly.
      1, bi-monthly
      3, quarterly.
      3, occasionally.
      1, weekly.
      1, daily.
      1, yearly.
   c. percentage for food.
      c. 2, 35 to 60 per cent.
      2, 50 per cent.
      1, 50 to 60 per cent.
      2, 70 per cent.
      4, 75 per cent.
12. Are students employed for resident service, dining room service, kitchen service.
   12.

YES	NO	DID NOT ANSWER
21	10	1
26	5	1
19	12	1

13. What remuneration for students?	13. 6, Money. 17, Meals. 0, College credit.
14. Are residences in any way connected with Home Economics Department?	14. 23, no. 1, as practice field. 7, yes; direct supervision. 1, did not answer question.
15. Are members of Home Economics Staff responsible for any part of residence work?	15. 23, no. 8, yes, Instructor of Institutional Management is business director and dietitian. 1, Did not answer question.
16. What bedding is allowed each student?	16. 19, none. 2, sheets, pillow cases. 3, blankets. 1, sheets, cases, blankets. 1, blanket and spread. 6, everything.
17. Are rugs and curtains supplied.	17. 11, no. 12, rugs. 1, curtains. 8, yes.
18. What maid service is allowed each student?	18. 6, daily (bedmaking). 8, weekly cleaning. 2, vacation cleaning. 11, none. 2, emptying waste baskets.

19. What do you consider your most difficult problems in management of residence and dining room?
    3, maintaining quiet for sleep and study—regular hours.
    1, too many different people in charge. Confusion of responsibility.
    2, pleasing everyone with food served.
    7, help problem.
    1, efficient help from students.
    1, keeping food and service up to standard.
    1, disregard of common property.
    2, developing sense of responsibility in the student.
    1, combination of social and other management.
    13, did not answer question.

GENERAL CONCLUSIONS

1. Duties of Social Directors.
    a. Room assignment.
        This responsibility seems to be about equally shared by the office of the Dean of Women.
    b. Chaperoning.
    c. Development of opportunities for the unsocial girl.
    d. Directing social life of students in residence.
    e. Responsibility for dining room conduct.
    f. First aid in case of sudden illness of students.
    g. Care of house guests.

2. Duties of business manager.
   - Supervision of housekeeping.
   - Selecting and placing orders for;
     - Kitchen and dining room equipment.
     - Furniture—furnishings.
     - Housekeeping supplies for cleaning.
     - Daily food orders.
     - Large food orders.
   - Charge of inside and outside repairs.
   - Making yearly budget for residence and dining room.
   - Checking bills.
   - Bookkeeping and accounting (in majority of colloges this is done in business office).
   - Engaging and discharging employees.
   - Determining wages.
   - Managing laundry.
   - Teaching institutional management classes.

EDITORIAL

Nutrition and Nerves

"There are many other ills, different from those of repletion, but no less dreadful, arising from deficiency of diet," so Dr. Frederick Peterson quotes Hippocrates in "Ancient Medicine" in the Presidential address to the Fifty-first Annual Meeting of the American Neurological Association in May, 1925, and adds that it is "worth while to read and study carefully both Hippocrates and McCollum on diet, for they are good friends . . . . and have shaken hands across the years."

Dr. Peterson speaks of the complete revolution in our knowledge of nutrition in the past fifteen years, the facts of which are not so well known to the medical profession or to the public as they should be. Muscles and seeds (in their large sense, i.e., cereals, potatoes, etc.) which form the staples of our diet are responsible for widespread physical deterioration in our country, and as McCollum points out, the borderline states of malnutrition—usually unrecognized because not pronounced—are the greatest menace to the individual when one considers health and efficiency from the standpoint of the whole life period. Dietary indiscretions as well as dietary deficiencies should be considered. He views with disfavor the "vast and growing consumption of candy and soda water . . . . on the ground that in the long run and on a wider scale they are more destructive than alcohol."

As a neurologist Dr. Peterson is chiefly concerned with the effects of faulty metabolism on the nervous system. Quoting McCollum, he says that "a deviation of the quality of the protein moity of the diet even in slight degree from the optimum exerts a profound influence on the life history of animals and on the functioning of the nervous system." McCollum found this more pronounced with diets deficient in calcium or phosphorus, and observed the same symptoms when the diet was deficient in the antineuritic substance, water-soluble B.

The symptoms of such deprivation are chiefly apprehension and irritability. By correcting the diet in a number of cases, the symptoms of fear and irritability disappeared in a few weeks. The Weir Mitchell therapy of 1877 treated somewhat similar cases successfully, giving diets containing liberal amounts of milk, butter, cod liver oil, and fluid extract

of malt. Dr. Peterson believes it is obvious that Weir Mitchell laid greater stress on nutrition than on the common sense psychotherapy that he also practiced.

The broad term neurasthenia designates the commonest of nervous disorders; it is largely treated by the general practitioner, under innumerable names and suppositions. Dr. Peterson suggests that it be studied from the standpoint of nutrition and fatigue.

MARY PASCOE HUDDLESON.

THE HOSPITAL DIETARY

It is encouraging indeed to find that an article appearing in our very first issue of the JOURNAL OF THE AMERICAN DIETITIC ASSOCIATION meets with a rather lengthy editorial comment in the *Journal of the American Medical Association*, for November 28, 1925. The paper referred to is "Certain Tendencies of Modern Hospital Dietaries," by Fitz and Lautz. It suggests to the editorial writer, that the medical student of today must be trained in preventive medicine in its largest sense. Correct living so far as man's bodily welfare is concerned, is destined to become an important theme for all medically trained persons. The hospital, as well, "must set an example to patients and personnel, by serving model normal diets which are inexpensive, easily prepared, palatable and well cooked, which contain sufficient bulk, calories, and protein to cover the ordinary metabolic and digestive needs, and which are so balanced in their food components as to be sound in theory and of practical usefulness."

M. P. H.

SERVICE FIRST

There is increasing evidence that doctors, nurses, and dietitians alike feel the need of some degree of standardization of diet orders. Type diets are a step in the right direction. For example, the order for "Gastric Ulcer regimé" may in a given hospital indicate Sippy Management; if another regimé is desired it must be specified. The plan of filing the type diets with standing orders enables the doctor to recall the general character of the diet his patient will receive when he orders a type diet. But no special diet can remain a type diet; it must be adapted and individualized. It is true that special diets may be grouped in fairly definite classes, but the grouping is accomplished after the diet has been adapted to the individual.

The question arises—how is the dietitian to receive the data which will enable her to adapt the type diet to the patient. Two sorts of diet order blanks are in use; both have been emphasized recently. One calls for only the Diagnosis or the Diagnosis and the Diet order; the other, detailed information concerning both the patient and the diet.

It is the privilege of the doctor to specify at any time, all details for the dietary management of his patient, but the system of ordering special diets should not require him to give all information for the interpretation of every diet order. For example, can the dietitian expect a busy doctor to indicate on an order for a reducing diet the present weight of the patient, the calories required, and other data necessary to carry out the order? Is it not her job to obtain such data? If she does not accept that responsibility she has withheld the intelligent coöperation a doctor has a right to expect. She has retreated to a position in which she exerts less initiative and gives less service than the Medical and the Surgical Staff may reasonably expect from her. She has intimated that she is incapable of gathering for herself the salient points from the records.

The objection may be made that there are dietitians who lack the training or experience to interpret and adapt a flexible diet order. Should the training or experience of those dietitians set the standard for the group? A standard too easily attained will make us lethargic. The diet order blank should allow the physician to order a diet (1) in great detail even to grams of individual foods, (2) by clinical and laboratory findings, (3) by diagnosis only, leaving to the dietitian the responsibility of getting history and chart such information as she needs. The sort of order given will vary with the physician, with the case, and with the dietitian. Let us seek an ideal which will stimulate the giving of all the service of which we are capable; an ideal which will inspire us with an insatiable desire for more study, more experience, more responsibility, more initiative to grasp all opportunities for service. And let those opportunities for service be limited only by our ability!

NELDA ROSS.

ACID-BASE BALANCE

Interest in acid-base balance of dietaries has increased greatly in recent years. Sherman gave us two bases for work along this line in the accurate determination of the ash constituents of common foods. It will be recalled that meats and cereals show a predominance of acid-forming

elements, while fruits and vegetables have an excess of base-forming elements. Exception to the latter statement are found in plumes, prunes and cranberries, which, though yielding a basic ash, nevertheless increase the acid excretion, due to the presence of benzoic acid, excreted as hippuric acid.

Although the question, whether or not, an acid-forming diet eaten for some period of time, is productive of undesirable results is debatable, probably the consensus of opinion is in favor of diets, in which the acid-forming and base-forming elements are approximately balanced.

Results obtained in Army ration investigation by Blatherwick at Camp Wheeler, are suggestive of a possibility that an acid-forming diet, consumed for long periods of time, may lead to a great susceptibility to disease of the less infectious type. Those, who have control of the feeding of the large numbers of persons in our public institutions, might well undertake an investigation of this problem.

As in the case of the Keto-Anti-Ketogenic ratio, the acid-base balance deserves special consideration in pathogenic conditions. A disturbance of the acid-base equilibrium—that protective mechanism of the body against acids—occurs in diabetes, nephritis, surgical cases and as a result of poisoning or starvation, and what is termed "acidosis" results. The liberal use of fruits and vegetables in the dietary, insures against a failure in equilibrium and is a measure of safety that can easily be attained by food administratives. More observations and experimental work must be done to determine just how far the acid-base balance figures in normal conditions.

KETO-ANTI-KETOGENIC RATIO

There is a reasonable relation between the metabolism of fat and that of carbohydrate. Zeller was the first to point out that when a man was placed on a 3000-calorie diet, with a constant amount of protein, but with varying amounts of CHO and fat, acetone bodies appeared in the urine when less than 10 per cent of the calories were in the form of CHO. He found that when the amount was only 5 per cent, a well marked acidosis occurred. Carbohydrate, in definite amounts, is indispensable for the burning of fat. The quantitative relationship between complete fat combustion and the mineral amounts of CHO required to cause it, is fairy established, but just what the mechanism is remains very obscure. A number of methods have been suggested for computing diets high in fat, but with a safe Keto-Anti-Ketogenic ratio. These vary in com-

plexity, depending upon the account taken of the acetone bodies derivable from the protein, and the carbohydrate available from fat and protein. One of the most practical formulas for clinical use is that of Palmer and Ladd:

$$\frac{\text{Total carbohydrate in grams} - \text{60 per cent protein in grams}}{\text{Total fat in grams}} = 1/3$$

When the Palmer-Ladd ratio is below 1 to 3, acidosis usually does not occur, but when it is higher, acetone bodies generally appear. However, fairly wide individual variation undoubtedly exist and a safe and yet quite liberal ratio is 1 to 2.5.

The amount of fat eaten by different people varies considerably but it is hardly likely that, in the normal dietary of any of these, an unsafe Keto-Anti-Ketogenic ratio occurs. In a diet of 3000 calories, this proposition will be very common: 400 grams carbohydrates, 100 grams protein, 100 grams fat, which provides for the exceedingly safe ratio of 1 to 0.22.

It is in diseased conditions where dietary restrictions and control is the sole or the chief part of the treatment, especially where CHO intake is limited, that intelligent attention must be given this factor. For instance, a diabetic diet, furnishing the same number of calories (3000) may be supplied by 90 grams CHO, 90 grams protein and 245 grams fat with a Keto-Anti-Ketogenic ratio of 1 to 1.7.

KATHRINE MITCHELL.

CURRENT LITERATURE

Modern Hospital:

October, 1925.

Pp. 279. The kitchen staff, its organization and management. C. W. Munger.

Pp. 314. Should coöperative purchasing prevail among hospitals?

Pp. 340. Pasteurized milk for public institutions. R. W. Archibald.

Pp. 344. One way the central tray service operates.

Pp. 352. Viewing food service from the patient's standpoint. S. Margaret Gillam.

November, 1925.

Pp. 456. Fruits of value in health and disease. Lulu G. Graves.

Hospital Management:

October, 1925.

Pp. 25. How a dietitian looks at her job. Elizabeth W. Hayward.

Pp. 29. Food service in a children's hospital. Nell Clausen.

November, 1925.

Pp. 53. Food cost chart set up by dietitians.

Pp. 56. Annual meeting of Dietetic Council.

Journal of Home Economics:

November, 1925.

Pp. 639. The nursery school in the home economics curriculum. Helen Monsch.

The American Food Journal:

September, 1925.

Pp. 426. Flavor as an aid to assimilation.

Pp. 427. Experiments with frozen beef.

Pp. 461. Requirements of the federal food and drug act.

October, 1925.

Pp. 474. Bread as the physician sees it.

Pp. 488. The story of evaporated milk.

November, 1925.

Pp. 527. In defense of the cranberry. Marius Hansome.

Pp. 543. Story of sauerkraut. J. J. O'Brien and Roy Irons.

Hygeia:

September, 1925.

Pp. 496. The home treatment of obesity.

November, 1925.

Pp. 627. The place of sugar in the diet.

Pp. 649. Are dried or canned fish safe foods?

The Nations Health:

September, 1925.

Pp. 637. Iodized water prevents goitre in Rochester, New York.

Pp. 603. Production of human milk as a commercial enterprise.

October, 1925.

Pp. 681. Effect of the school nutrition class on underweight.

Pp. 715. Protein reactions in epilepsy.

Journal of American Medical Association:

October 10, 1925.

Pp. 1131. Production of gastric ulcer by local allergy. A. C. Ivy, M.D. and P. F. Shapiro, B.S.

October 24, 1925.

Pp. 1285. The control of foods eaten raw. Herman N. Bundesen, M.D.

October 31, 1925.

Pp. 1376. Peptic ulcer of the stomach. Howard T. Karsner.

Pp. 1381. Diagnosis of peptic ulcer. R. D. Carman, M.D.

Pp. 1382. Peptic ulcer from internist's standpoint. L. F. Barker.

Pp. 1392. Meat inspection as health measure. W. H. Lipman, M.D.

November 7, 1925.

Pp. 1468. Physiology of the liver. (Present status of our knowledge.) A. J. Carlson, Ph.D.

November 21, 1925.

Pp. 1599. Normal gastric digestion. Martin E. Rehfuss, M.D.

November 28, 1925.

Pp. 1703. Diet in etiology of nephritis. L. H. Newburgh, M.D., P. L. Marsh, M.D., Sarah Clarkson, M.S., A. C. Curtis, M.D.

December 5, 1925.

Pp. 1777. Variations of the intestinal rate. Francis Lowell Burnett, M.D.

The American Journal of Physiology:

September, 1925.

Pp. 14. A conditioned salivary reflex established by chronic morphine poisoning. K. H. Collins and A. L. Tatum.

Pp. 22. Glyconeogenesis. J. Markowitz.

Pp. 36. Observations on depancreatised dogs before and after withdrawal of insulin. I. L. Chaikoff, J. J. R. MacLeod, J. Markowitz, W. W. Simpson.

Pp. 49. Studies on the physiology of the liver. XI. The Extrahepatic formation of bilirubin. Frank C. Mann, Jesse L. Bollman, Charles H. Sheard.

Pp. 70. Nutritive values and physiological effects of different fats and oils. F. J. McClure and R. H. Carr.

Pp. 115. The effect of sleep on blood pressure. M. A. Blankenhorn and H. E. Campbell.

Pp. 151. Normal variations of percentage weights of body organs of the albino rat with changing body weight. A. T. Cameron.

Pp. 188. Studies of emotional reactions, IV. Metabolic rate. Carney Landis.

Pp. 204. Heat regulation and water exchange. X. Water, salt and lipoid accumulation in the serum as a preliminary to sweating. H. G. Barbour, M. H. Dawson and I. Neuwirth.

October, 1925.

Pp. 225. Studies on the physiology of sleep, III. Nathaniel Kleitman.

Pp. 238. Studies of the physiology of the liver, III. J. L. Bollman, F. C. Mann, and T. B. Magath.

Pp. 291. Studies on the conditions of activity in endocrine glands, XVII. The nervous control of insulin secretion. S. W. Britton.

Pp. 309. Spectrophotometric analysis of commercial insulin. E. J. Baldes and S. F. Adams.

Pp. 317. The effect of histamine on cerebrospinal fluid pressure. Ferdinand C. Lee.

Pp. 334. Studies on muscular exercise under low barometric pressure I. Edward C. Schneider and Robert W. Clarke.

Pp. 359. Egg white vs. casein as source of protein in the diet of rats. Helen S. Mitchell.

Pp. 363. The hydrogen ion concentration and basicity of egg yolk and egg white. Daniel J. Healy and Alfred M. Peter.

Pp. 369. Is prolonged bed rest a prerequisite for the measurement of basal metabolism? Francis G. Benedict and Elizabeth E. Crofts.

Pp. 436. Factors influencing the excretion of urea. II. H. Bourquin and N. B. Laughton.

Journal of Biological Chemistry:

September, 1925.

Pp. 279. Preparation, solubility and specific rotation of wheat gliadin. D. B. Dill and C. L. Alsberg.

Pp. 305. Studies in carbohydrate metabolism. Christen Lundsgaard and Svend Aage Holboll.

Pp. 323. II and III. Investigations into the nature of glucose in the blood of normal individuals.

Pp. 343. IV-Nature of the glucose in the blood of patients with diabetes mellitus and of patients with benign glycosuria.

Pp. 363. V-Form of glucose in different body fluids.

Pp. 371. The electrodialysis of agar. Walter F. Hoffman and Ross Aiken Gortner.

Pp. 381. Studies of acidosis, XXI. The colorimetric determination of urine. A. Baird Hastings, Julius Sendroy, Jr., and William Robson.

Pp. 393. A more specific reagent for determination of sugar in urine. James B. Sumner.

Pp. 397. The carbohydrate metabolism of tumors. Carl F. Cori and Gerty T. Cori.

Pp. 457. Vitamin B in the excreta of rats on a diet low in this factor. W. D. Salmon.

Pp. 483. The concentration of vitamin B. II. P. A. Levene and B. J. C. Vander Hofen.

Pp. 519. The dissociation constants of plant nucleotides and nucleosides and their relations to nucleic acid structure. P. A. Levene and H. S. Simms.

Pp. 545. Bromolecithins I. Fractionation of brominated soy bean lecithins. P. A. Levene and Ida P. Rolf.

Pp. 551. The thio-sugar from yeast. P. A. Levene and Harry Sobotka.

BOOK REVIEW

FOOD NUTRITION AND HEALTH. E. V. McCOLLUM, PH.D., Sc.D., and NINA SIMMONDS, Sc.D. Hygiene. (Published by the authors, Baltimore, 1925.)

A friend of the authors of this book happened to pass through Baltimore when the third edition of The Newer Knowledge of Nutrition was approaching completion. Dropping into the friendly and inspiring old basement laboratory and seeing a formidable pile of yellow sheets, she exclaimed: "Oh, I do hope it's going to be smaller than the second. Nobody has time nowadays to read a book of that size!" Too tactful to observe a lack of tact in others, the authors replied cheerfully, "Sorry. It's going to be bigger!" Not knowing whether her chance remark had anything to do with it, their untactful friend cannot justly congratulate herself upon having inspired the publication of this latest, really little, book, but she does congratulate the authors on its 143 little pages (including tables and index).

The introduction discusses chiefly appetite and recent changes in American diet; then follow five chapters on the five vitamins, touching on the history of the studies concerning them, their occurrence, and their physiological significance; a chapter on pellagra; one on mineral matter in foods; one on the quality of protein; five on the dietary habits of man, the dietary properties of foods (including tea and coffee) and the relation of life history to diet; five on the relation of diet to the health of the nervous system, the digestive tract, the teeth, and body weight, concluding in chapter twenty with A System of Diet for the Promotion of Health with Menu Suggestions.

Perhaps the book's worst feature is its consistent adherence to a plan of summarizing in a brief, accurate, non-technical way some of the conclusions of the authors from study of the dietary habits of human beings all over the world and also from sixteen years' observation of from 2000 to 3000 laboratory animals. This whets the appetite of the reader for more data on this point, and more evidence on that one: driving him back to the "too big" third edition after all.

R. W.

ASSOCIATION NEWS

REPORT OF THE BUSINESS MEETING OF THE EIGHTH ANNUAL MEETING OF THE AMERICAN DIETETIC ASSOCIATION

October 12 to 16, 1925

The meeting convened at 2:30 p.m., October 12, President Dr. Ruth Wheeler presiding.

A motion to dispense with the reading of the minutes of the last business meeting was seconded and carried.

Miss Anna E. Boller gave the report of the Constitution Committee. Mrs. Mary de Garmo Bryan moved that the old constitution be withdrawn and the new constitution and by-laws be adopted. Miss Quindara Oliver seconded the motion.

In opening the discussion of the constitution, Mr. Edward P. Morse, the lawyer, gave an explanation of the reason for adopting a new constitution; namely, that the old one did not conform with the Articles of Incorporation of the Association. He said that the new one was planned to conform with the laws of Illinois and with the charter of the Association. He also explained the plan of organization of the contitution and of the by-laws as follows:

"The constitution itself, undertakes to give to the members rights, which are theirs in so far as the members are concerned, and defines who may be members of the society, while the by-laws undertake to provide a means by which the business of the society may be efficiently carried on by the officers, and provide rules of conduct for the officers and directors, or Executive Committee, as we call it here."

The Secretary, Miss Amalia Lautz, read the constitution, article by article.

In Article III, section 1, under Membership: Miss Nelda Ross moved that a fourth class of honorary membership be inserted. She explained that the purpose was to provide a means by which those persons who are not eligible to membership in other classes, but who have made some notable contribution to the cause for which the Association stands, could be elected to such membership. The motion was seconded and carried.

Miss Lautz read Article III, section 2, Membership. Miss Oliver proposed that the educational qualifications of this section be changed to four years with a bachelor's degree, with a major in Home Economics, from an institution of recognized high rank.

The motion was made to amend the amendment by omitting four years. Mrs. Griem seconded the motion. After a discussion carried on by Miss Maude Perry, Miss Emma F. Halloway, Mrs. Bryan, Miss Oliver, Miss Grace Moreland, Miss Abby Marlatt, Miss Emma L. Feeney, Mrs. Lula S. Hawkins, Mrs. Griem, Mrs. Ward, Miss Martha Davis and Dr. Ruth Wheeler; the amendment to the amendment was carried.

Miss Marlatt brought up the question of why the members had to be approved by the Executive Committee. Mrs. Griem explained that the Membership Committee did not feel that they should take the right to put final approval or disapproval upon questionable applications and felt that it would be much better to have such applications come before the Executive Committee.

There was also a discussion in regard to the time when the higher standard was to take effect and Mr. Morse suggested

that a definite date be added to the amendment. He suggested that the old amendment be killed and another substituted.

Miss Oliver withdrew the motion with Mrs. Griem's consent and Miss Oliver then moved that section 2 read as follows:

"Active membership. Any person possessing the following qualifications may be an active member of the Association by vote of the Membership Committee, subject to approval by the Executive Committee. A. Education. A bachelor's degree with a major in foods and nutrition, from a recognized college or university, effective October 1, 1926."

Mrs. Griem seconded the motion, which was carried.

It was suggested by Mrs. Griem that Article III be amended by the addition of section 5, which is as follows: "Any person who has made notable contribution to the field of nutrition and is not eligible for active membership may be elected to honorary membership of the Association."

Mrs. Bryan made this motion, which was seconded, and carried.

There was a discussion of Article III, carried on by Mr. Morse, Miss Ruth Chambers, Miss Perry, Miss Marlatt, Miss Laird, Dr. Wheeler, Miss Weber.

Secretary Lautz read Article IV. Miss Ross moved that in section 2, the wording be changed from administrative and educational, to administration and education. This motion was seconded and carried.

Secretary Lautz read Article V. Miss Oliver moved that under section 1, class D be inserted to read as follows: "Honorary members shall have the same rights and privileges as active members without the privilege of voting or of holding office." Mrs. Griem seconded the motion which was carried.

Secretary Lautz read Article I of the by-laws.

Miss Oliver raised the question as to whether it was necessary to have "In Riverside, in Cook County, Illinois." Mr. Morse explained that it was necessary to have an Illinois office stated and therefore, he had put it as the office of the Association.

Mrs. Griem moved that notices of the meetings be sent out at least twenty days before the meetings. The motion was seconded and carried.

Miss Marlatt moved that the word "they" in section 2 be changed to read "members of the Association." This was seconded.

The Article was carried as amended.

Secretary Lautz read Article II of the by-laws.

Miss Ross moved that in section 1, the terms administrative and educational be changed to read Administration and Education. Mrs. Griem seconded the motion which was carried.

Miss Porter moved that in section 3, f, the word "appointed" be removed from the constitution as this would carry for elected officers as well. Mr. Morse explained that this point was cared for in section i. The motion was lost.

Miss Davis moved that the word twenty be substituted for the word ten in section 6, in regard to notices sent to the Executive Committee. Mr. Morse explained that the Executive Committee carried the business of the organization and that there might be things that would come up which should not wait for twenty days. The motion was lost.

Miss Laird moved that in section 7 "at least five" should be changed to read "at least six," as four members of the Executive Committee are appointed instead of elected and the president plus four chairman makes five. Mrs. Griem seconded the motion which was carried.

Secretary Lautz read Article III of the by-laws.

Miss Perry moved that the reading of section 4 be changed to read, "two consecutive terms." Mrs. Griem seconded the motion which was then carried.

Secretary Lautz read Article IV of the by-laws.

Miss Porter moved that the words Administrative and Educational be changed to read Administration and Education, in section 1. This was seconded.

Mr. Morse suggested that the Nominat-

ing Committee had been left out and should be inserted preceding the word Administrative in section 1.

Miss Laird so moved.

Mr. Morse suggested that in order to conform with the above, the words "shall be elected or appointed," should be included, and suggested that the first motion be withdrawn and a new one made.

Miss Porter withdrew her motion and Mr. Morse read the section, including the porposed changes as follows:

"The following standing committees and sections shall be elected or appointed for the term and with the powers and duties hereinafter set forth: Nominating, Administration, Education, Dietotherapy and Social Service."

President Wheeler stated that a seconded motion was before the Association to repeal the previous constitutions and to adopt the new constitution and by-laws as amended at the present session. The motion was carried.

President Wheeler called for a report from the Nominating Committee and Miss Davis gave the following report:

For President: Dr. Wheeler.

For Vice President: Dorothy Stewart, Gudrun Carlson.

For Second Vice President: Florence H. Smith, A. L. Laird.

For Secretary: Katherine Fisher, Amalia Lautz.

For Treasurer: Louis Keegan, Theresa Clow.

President Wheeler appointed the following as tellers: Mrs. Esther Ackerson Fischer, Miss Alida Pattee, Miss Elva Goerge, Miss Mabel Little, and Miss Bozarth.

President Wheeler called for further nominations from the floor.

Miss Laird moved that the Association elect Dr. Wheeler from the floor and asked that the Secretary cast the ballot.

A rising unanimous vote for Dr. Wheeler as President.

Miss Laird withdrew her name from the nominations, as she will be away a great part of the time.

President Wheeler called for any other business which should come before the meeting.

Miss Boller moved that there be a small registration fee to cover the incidentals at Convention, the amount suggested being a a dollar. This was seconded, and after much discussion the motion was lost.

Miss Boller moved that the fiscal year close August 30 rather than November 30 in order to give the auditing committee ample time to appoint an auditor and have the report ready for the annual meeting. This motion was seconded and carried.

Miss Little read the report of the tellers which was as follows:

President: Dr. Ruth Wheeler.

Vice President: Dorothy Stewart.

Second Vice President: Florence H. Smith.

Secretary: Katherine Fisher.

Treasurer: Theresa Clow.

Miss Perry moved that the meeting be adjourned and preferred having the President call another meeting if she thought it necessary.

Report of the Special Business Meeting Called by the President

President Wheeler called the meeting to order.

The Nominating Committee was elected and the members are as follows: Miss Effie Raitt, Mrs. Octavia Hall Smillie, Miss Mame Porter, Miss Grace Moreland, and Miss Eva Thallman.

There was considerable discussion started by Miss Halliday in regard to the question of Educational qualifications and President Wheeler explained that the lawyer had been consulted in order to find out if the matter could be considered, but as the other meeting was adjourned without a date, it would not be legal to consider the matter without giving all members the required notice.

Miss Halliday moved that an amendment be worded and offered for voting upon next

year, that would offer some means by which a student having at least two years training might become an associate member of the organization. This motion was seconded and carried.

President Wheeler called for the Treasurer's report.

Miss Boller gave the Treasurer's report, showing a balance of $1015.62. The Association also having $2500.00 in bonds on which there is a note for $800.00.

Miss Boller gave the Exhibit Committee report which is as follows:

"The Exhibit was only slightly larger than last year, as the available space would not permit of much expansion. The sale of space brought the Association $3625.00, which was about $1000.00 more than received from exhibits last year.

"The firms seemed well satisfied in the interest the members showed in the exhibit. This interest is appreciated as these firms go to considerable expense and trouble to show us their products, and it is hoped that they will be given orders whenever their products are equal in quality and price to those products already being used."

President Wheeler expressed her appreciation of the attitude of the exhibitors which seems to be the hope of getting something in an interchange of ideas when they come to the meetings.

Miss Boller asked that the dietitians respond to the questionnaires sent to them with reference to whom among the dietitians does buying for their hospitals. She explained that this was done in order to be able to answer the many questions with regard to the matter.

Miss Boller then gave the JOURNAL report which is as follows:

"To date the JOURNAL has cost us $510.24. We have had difficulty in getting ads for the JOURNAL. In the first issue, the firms did not wish to consider it as they naturally wanted to see a copy of the JOURNAL first, and as the second JOURNAL went to press just about as the first one came out, there was no time to get ads for that issue. However, we are working on the next issue and as soon as Convention is over, we shall make that our main business until the JOURNAL goes to press. We have two contracts, one for a quarter page ad in three issues, and one for a whole page ad in three issues.

"In talking with several advertising managers, they state that they had the same difficulty in getting advertising in their journals. So, although we are not receiving much money, it is rather the natural difficuty of a new journal.

"We have a few paid subscriptions and apparently there is an interest in it among the agencies, as three agencies have written to know the commission allowed. As soon as these questions are decided by the Journal Board, they will doubtless obtain more subscriptions for us."

Miss Boller then gave the report of the Placement Bureau which is as follows:

"The number of dietitians who have registered are 126. The hospitals requesting dietitians have numbered 96. The number placed is very indefinite, as there is considerable thoughlessness in informing the Bureau.

"There have been 252 names sent out, which makes an average of at least twice for every dietitian registered, and nearly 3 names suggested for each opening.

"The plan that has been followed is as follows: When a request for a dietitian has been received, the names are sent to the hospital and the superintendent then communicates directly with the dietitian, whom he feels is qualified for the opening which he has.

"In some cases where dietitians have not heard from any of these positions, they have thought that the Bureau was not trying to place them. In a small Bureau it is sometimes rather hard to have the position and the right person at the same time.

"To overcome this difficulty a new plan is being worked out, and an announcement will probably be sent to each member in the near future."

The meeting was adjourned.

Report of the Resolutions Committee

Resolved that we are greatly indebted to the following:

To Dr. Ruth Wheeler for this year's notable achievements and for accepting the Presidency for another year.

To The Chicago Dietetic Association for their welcome, hospitality and well planned trips.

To The Edgewater Beach Hotel including Mr. Dewey, the manager; Mr. Wilson and Mr. Caldwell, the assistant managers; and Mr. Shercliffe, the manager of the catering department, for their courtesy and kindness to our Association and its guests.

To Miss Anna E. Boller for her cheerful, unflagging zeal.

To Dr. Kate Daum for the excellent program.

To Mr. Edward P. Morse, our attorney, for his skillful assistance in shaping our constitution.

To the Speakers for the stimulation they have given us for another year's work.

To the Exhibitors for their spirit of cooperation and contributions to our field.

To Miss Theresa Clow and her Committee for the constructive features of the Non-Commercial Exhibit.

To the two Stenographers, Mrs. Dorothy Richmond and Miss Della Coyne, for their untiring services.

To the Chicago Institutions who have opened their doors to The American Dietetic Association.

(Signed) Majorie Hulsizer Copher,
Chairman.

NEWS NOTES

On November 15, 1925, a tea was given for the members of the New York Association of Dietitians at the Woman's University Club, 106 East 52d Street, New York City. Miss Margaret Hessler, of the Department of Nutrition, Teachers College, was the principal speaker. Her subject, "New Phases of Normal Nutrition," was exceedingly helpful, representing as it did a resume of the more important recent developments in the research field of nutrition which were applicable in the everyday feeding of normal children and adults. The Chicago Convention was discussed briefly by Miss George, Mrs. Bryan, Dr. Seaman and Mrs. Huddleson.

The programs for December and January meetings are as follows:

December 14, Monday, at 8:00 p.m., New York Hospital, 8 West 16th Street.

"Food Service in the Hospital," discussed by hospital Superintendents.

"Food from the Main Kitchen," Miss Wells, Presbyterian Hospital.

"Service of Special Diets," Miss Chesterman, Brooklyn Hospital.

"Central Service," Miss Hickox, Fifth Avenue Hospital.

"The Nurse and the War Diet," Miss Griener, Mt. Sinai Hospital.

January 11, Monday, 8:00 p.m., Mayfair Demonstration Auditorium, 25 West 43rd Street.

"Dietitians in Commercial Work," Miss Sicher in charge.

"How I Built up My Trade," Alice Foote MacDougall.

"Foundation of Costs and Food Values from the Coöperative Angle," Mary Elliott Arnold.

"Cafeteria Planning," Blanche Geary.

The Minnesota Association of Hospital Dietitians had their annual election of officers at the November meeting in Millard Hall, University of Minnesota.

The following officers were elected:

President: Winifred P. Howard, Ancker Hospital, St. Paul, Minn.

Vice-President: Lois Hurlibut, General Hospital, Minneapolis, Minn.

Treasurer: Louise Marty, Asbury Hospital, Minneapolis, Minn.

Recording Secretary: Joan E. Bocyink, Fairview Hospital, Minneapolis, Minn.

Corresponding Secretary: Harriett S. Warmington, United States Veterans Hospital, No. 65, St. Paul, Minn.

Miss Eva Thallman had a very serious accident while riding a horse on November 15. She suffered a broken wrist and several other fractures and bruises, but is slowly recuperating from her injuries.

Octavia Hall Smillie, has a new wee baby girl born November 10. The baby's name is Ann Dickson Smillie. Dr. W. G. Smillie is located in New York City with the Rockefeller Foundation at present. Mrs. Smillie's address is now 130 Twenty-first Street, Jackson Heights, Long Island, New York.

Amalia Lautz is doing graduate work in Education and Biological Chemistry at Harvard University, and is leading the monthly Nutrition Seminar of the Massachusetts Dietetic Association. These meetings are held in addition to the regular monthly meetings.

Quindara Oliver, until recently chief of the Nutrition Department of the Children's Hospital, in Boston, is finding her venture into the commercial field with Thompson's Spa, very interesting.

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